The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1808.—Vol. XL. LONDON, SATURDAY, APRIL 16, 1870. (WITH SUPPLEMENT) {STAMPED ....SIXPENCE. UNSTAMPED..FIVEPENCE,

FOREIGN MINING AND METALLURGY.

The various copper markets of the Continent appear to have slightly improved, but scarcely any advance has been established. The French tin markets present a favourable tone. Banca is quoted at 132*l.*; Straits at 130*l.*; and English, to be delivered at Havre or Rouen, 129*l.* per ton. In Holland, Banca tin has returned to a quotation of 75½ fls., and Billiton might be bought at 74½ fls. The Society of Commerce has already a great stock on hand for the September sale. There is little change to notice in lead; zinc is also quiet upon all the markets, and prices have not experienced any sensible modifications.

The greatest activity still prevails in the French coal basins. Some old contracts have been renewed, and in some instances a "majoration" of prices has been enforced, resulting from the numerous engagements entered into previously by coalowners. There are scarcely any stocks, sales fully keeping pace with the extraction. The Paris coal market maintains a favourable tone; coal has, however, become rather less scarce in the French capital, in consequence of the considerable arrivals by navigations and railways which have taken place during the last few days. Uncertainties with reference to the future operation of the octrois have prevented some contracts being concluded. The revival which has appeared in the French iron trade has become more and more decided; everywhere orders are beginning to become abundant, and if some works have not a sufficiency of orders to fully employ their productive powers, this is simply due to the fact that their proprietors maintain an attitude of reserve in concluding contracts, considering that what may be deferred is not necessarily lost. In the Champagne district coke-made iron, which was neglected, has revived, in consequence of some rather important sales. Other descriptions have also given rise to well-sustained operations. An important contract for mixed pig, half coke-made, has been concluded at 4*l.* per ton, at the producing works; charcoal-made pig has been dealt in with firmness, at 4*l.* 16s. per ton. The foundries of the Champagne group have received some orders of ate. Thus the Bussy works are making six iron bridges for the Eastern of France Railway Company, 200 switches, and a certain quantity of castings for wagon construction purposes. The Meurthe and Moselle districts display favourable tendencies; refining pig is much sought after, and the orders received, added to contracts previously concluded, render producers very exacting. The Pont-à-Mousson works are making a considerable quantity of pipes for Paris; these works have four blast-furnaces lighted, and are producing at the rate of 600 to 700 tons per month. It is stated that M. Devienne proposes to construct in the Meurthe an establishment in which he would undertake the production of pipes on the Lavril system. The rolling-mills of the Meurthe and the Moselle are very actively employed, and quotations of iron are stationary, at 8*l.* 4s. per ton. We stated recently that MM. de Dietrich and Co. had ordered from MM. de Wendel the iron required for the construction of 500 trucks, which they are about to deliver to the Paris, Lyons, and Mediterranean Railway Company. It appears that MM. de Wendel will share the order with MM. Dupont and Dreyfus, and MM. Karcher and Westerman.

The Paris iron market presents confidence in the future, and shows considerable firmness. A rolling-mill of the Nord has just made an advance of 4s. per ton in merchants' iron, and is still only prepared to undertake engagements of short duration. The general opinion at Paris appears to tend not only in the direction of an advance in merchants' iron, but also in iron for building purposes, which will be still scarcer than last year, since some of the works producing this latter description propose to apply themselves instead to the manufacture of rails. In connection with certain lines proposed to be constructed in the North-East of France, we may note that 35,000 tons of rails have been ordered from the Vezin-Aulnoye Company at 8*l.* 2s. at the works, and 1800 tons of fish-plates at the rate of 8*l.* 18s. per ton; 90 tons of bolts and cramps have been ordered from the Vankalk house at the rate of 12*l.* 16s. per ton, delivered on the spot. The Northern of France Railway Company has ordered from the Creusot Works 2000 tons of Bessemer steel rails, at 11*l.* 10s. 3d. per ton, in warehouse at La Chapelle; it is still affirmed that the company proposes to replace iron rails with steel rails upon all its lines. The Northern of France Company has also ordered ten hydraulic cranes from the Marquise Company, at 15*l.* 4s. per ton, in warehouse at Marquise. The Western of France Railway Company has ordered 1000 tons of special cast-iron chairs for crossings from M. Doré, at 6*l.* 5s. 9d. per ton, in warehouse at Batignolles; 300 tons of Bessemer steel fish-plates from the Terre-Noire Company, at 10*l.* per ton, delivered at Batignolles; and 100,000 fish-plate bolts from the house of Levent and Co., at 14*l.* 6s. 6d. per ton, in warehouse at Batignolles. The Paris, Lyons, and Mediterranean Railway Company has ordered 1,000,000 cramps from MM. Briqueler and Loiseau, at 11*l.* per ton, delivered at Bercy. The Eastern of France Railway Company has ordered an iron bridge to be built of plates, and of 300 ft. opening, from MM. Joret and Co., at 16*l.* 10s. 3d. per ton; 100 tons of cast chairs from MM. Haldy, Roechling and Co., of Pont-à-Mousson, at 5*l.* 8s. per ton, in warehouse at that town; and 50 signal masts of MM. Vivaux and Co., at 22*l.* per ton, in warehouse at Petit-Narcois or Chinon. The Charentes Railway Company has ordered of the house of Charpentier, of Paris, twelve hydraulic cranes and six reservoirs to be built of plates. The price to be paid is 22*l.* 8s. per ton for the cranes and 24*l.* per ton for the reservoirs, to be delivered free in warehouse at La Rochelle. The Stenay Works, situated on the Meuse, and near the line of railway in course of construction from Sedan to Lerouville, have just been stopped. The proprietors, MM. Lallemand and Rivart, have leased the forge to MM. Philippe and Bradfer, whose speciality will be axles, for which a considerable outlet has been found on the Paris market. On the opening of the Sedan and Lérouville Railway the Stenay Works are expected to be again brought into activity.

Belgian metallurgy maintains a prosperous tone, and the current orders received daily by the works maintain the price of merchants' iron with great firmness. Plates, under the influence of rather important orders, display a serious upward tendency. The rolling-mills are actively completing the important orders which they have received from abroad, and which will occupy their means of production for several months more; in the interim, fresh contracts are confidently expected to present themselves. A good current sale continues to be noted in Belgium for coal for industrial purposes; but there is a certain falling off in the demand for domestic qualities, in consequence of the progress which spring weather has now made. Upon the whole, the aspect of affairs continues satisfactory, as is evidenced by the want of rolling-stock, which is still experienced on certain lines. The production of coke is still increasing, and it may be fairly said that it is assuming extraordinary proportions.

MANUFACTURE OF STEEL.—According to the invention of Mr. T. S. BLAIR, of Pittsburg, it is proposed to make any of the various oxides of manganese according to economic advantages, and reduce it to about the same degree of fineness to which iron or other oxide has been reduced that is to be employed in the manufacture of the conglomerate or "pig bloom." It may be in the form of powder, but as it is important that it should be well and evenly mixed through the ore, it will be found desirable to have the two materials of about an equal degree of fineness. To determine the quantity of oxide of manganese that should be employed it is best to commence with test mixtures, whereby to establish rules for the use of any particular materials that are to be operated with. There is such a wide variation in the composition and character both of the manganese and iron materials that no other method is safe. But it may be stated, in general terms, that a good test mixture to commence experimenting with is such as will give about 1 per cent. of metallic manganese to the weight of metallic iron in the pig bloom.

Great Fron Fownog Consolidated Lead

MINING COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867, which limit the liability of each shareholder to the amount of his shares.

CAPITAL £20,000, IN 4000 SHARES OF £5 EACH.

10s. on application, 10s. on allotment, and £4 by calls of not exceeding 10s. each, quarterly, if required.

DIRECTORS.

DAVID DAVIES, Esq. (CHAIRMAN), No. 51, Catherine-street, Liverpool.
JOHN WILLIAMS, Esq., 13, Bently-road, Princes-park, Liverpool.
EDWARD RIGBY, Esq., 205, London-road, Liverpool.
JOHN S. DE WOLF, Jun., Esq., Clifton-park, Birkenhead.
ALLEN GREEN, Esq., Green-lane, Rock Ferry, Cheshire.
ROBERT YATES, Esq., Bradshaw-gate, Bolton.
ROBERT LOMAX, Esq., 73, Manchester-road, Bolton.
(With power to add to their number.)

BANKERS—NORTH AND SOUTH WALES BANK, AND BRANCHES.
AGENTS—LONDON AND WESTMINSTER BANK, Lothbury, London.
SOLICITOR—R. J. JONES, Esq., 5, Harrington-street, Liverpool.
MANAGER—Captain WILLIAM WASLEY, Fron Fownog, near Mold.
SECRETARY—E. J. HALE, Esq.

OFFICE,—ARVON CHAMBERS, 9, CANNING PLACE, LIVERPOOL.

PROSPECTUS.

This company is established to work and effectually develope the valuable lead mining property consisting of Summer Hill and Fron Fownog Mines, and adjoining lands (situate in the parish of Hendrebiffa, near Mold, in the county of Flint), which have already been laid open, and proved to a considerable extent, indeed sufficiently so to justify as an investment the purchase and expenditure of about £9000, and which, it is confidently expected, will lay open paying ground sufficiently extensive to dispense with further calls, and establish a permanent dividend-paying property.

The directors have, therefore, much confidence in introducing this enterprise to the notice of their friends and the public, having effected the purchase of the entire property, including the Summer Hill Mines, for a sum of £5000—2000 shares half paid up—thus showing the great confidence of the lessees, as well as the directors, in the future of the undertaking. The total area of the ground is very extensive (above 200 acres), and the grants extend over a period of 21 years, at a royalty of 1-16th. The facilities for working are much more favourable than similar undertakings.

Upwards of £3000 worth of lead was raised at the Summer Hill Mine between January, 1866, and December, 1868, and £1200 was paid in dividends. A new shaft has been sunk, and the flat reached, from which it is expected that fresh runs of ore will soon be discovered.

The accounts of the Fron Fownog show that about £99,000 worth of ore was raised, and about £31,000 profit made, as will be seen from the reports of that mine which are annexed, and are highly promising, leaving little doubt of ultimate success.

The company's mines are bounded on the south by the Mold Consolidated Mines, and in the immediate neighbourhood of the Alexandra, Fron Isa, Fron Hall, Hendra Ucha, East Maes-y-Safn, Macs-y-Safn, Jamaica, Bryngwyn, and other noted mines, which have paid their shareholders many hundred thousand pounds profit. On the north are the Pant-y-Buarth, Pant-y-Newyn, Coed-y-Hendra, Great Rhosesmor, and other mines, which have also yielded enormous profits. Upwards of two-thirds—in fact, nearly three-fourths—of the shares have been already allotted to 67 shareholders; twenty of whom are resident in the immediate neighbourhood of the mine, and other parties in the locality have signified their intention of taking shares, thus showing the general good opinion entertained by all who know the property, added to which most of the prospectuses of mines in the neighbourhood speak in high terms of these mines.

Applications for shares to be made to R. J. JONES, Esq., the solicitor of the company, 5, Harrington-street, Liverpool; E. J. HALE, Esq., secretary, Arvon chambers, 9, Canning-place, Liverpool; or to J. H. COCK, Esq., broker to the company, 74, Old Broad-street, London.

The Aberdovey Mines Company

(LIMITED).

Incorporated March, 1870, under the Companies Acts, 1862 and 1867, by which the liability of each shareholder is limited to the amount of his subscription.

CAPITAL £20,000, IN 20,000 SHARES OF £1 EACH.

Payable, 10s. on application, and 10s. on allotment.

Under the provisions of the Articles of Association of this company, shareholders can receive Share Warrants to bearer, issued under the provisions of the Companies Act, 1867, which may be passed from hand to hand like a bank-note, and by which all the trouble, expense, and delay of making, stamping, and registering transfers is avoided.

REGISTERED OFFICE, 37, SOUTH CASTLE STREET, LIVERPOOL.

DIRECTORS.

F. J. BROWN, Esq., St. Asaph.
THOMAS CARTWRIGHT, Esq., Bridge-street, Chester.
The Chevalier HARRY CLENCH, K.G.S., K.G.C., K.L.H., K.S.J., &c., Norwich.
HENRY DOBSON, Esq., Liverpool.
J. W. KELLY, Esq. (Messrs. Horn and Kelly), Liverpool.
G. J. WRIGHT, Esq., Chorlton-on-Medlock, Manchester.

BANKERS—ALLIANCE BANK (LIMITED), Liverpool.
SECRETARY—Mr. ROBERT JOHNSON, 37, South Castle-street, Liverpool.
BROKERS—Messrs. LISCOMBE and Co., Liverpool.

This company has been formed for the purpose of purchasing and working the well-known extensive leasehold property known as the Aberdovey Lead Mines, Merionethshire, North Wales, situated in the heart of the great lead region of the Principality, from which, during the last few years, so many enormous fortunes have been accumulated.

Although well known to those engaged in mining pursuits, it is only within the last year that the general public seem to have become alive to the unrivalled metalliferous deposits of the great central Silurian basin of Wales. The Van Mine, upon which only a few hundred pounds had been expended by the proprietors—two private gentlemen—and which, in consequence of the death of one of them, was sold, a little more than a year ago to a London company for something under £40,000, is at the present moment actively sought for on the London Stock Exchange at upwards of £86 per each 12,000th share, giving a total value for the mine of about £1,040,000, and showing a profit to the bold and fortunate purchasers of one million sterling in little more than 12 months. This is a great result, but still only one among the marvellous successes of Welsh lead mining. A glance at the Stock Exchange Share List will show numerous other mines, where, if the success has not been on quite so colossal a scale as at Van, yet within a few months investments of shillings have been turned into pounds; Tan-yr-Allt, Van Consols, Assheton, and many others shown in these lists are evidences of this; but the shares market alone, although thus showing profits which would seem almost fabulous were they not already realised, gives but a feeble idea of the enormous profits realised from investments in Welsh lead mining: for many of the present lead mines of the Principality are entirely in private hands, among which may be named the Dyliffe Mine, which belonged at one time to the late Mr. Cobden, M.P., with whom became associated the Right Hon. John Bright, M.P., the Right Hon. Milner Gibson, formerly M.P. for Manchester, and many others, who, from their success in Dyliffe, have become the leading capitalists of Lancashire.

The Aberdovey Mines are no new or purely speculative mines, nor, on the other hand, are they abandoned mines, the re-working of which could only be resumed at great cost; they are mines which have been working upwards of 15 years, which, although the workings have been suspended, have never been abandoned, have made great returns, and no inconsiderable profit. They are at present in full working order, being supplied with buildings, pumping, hauling, and dressing machinery, and a plant of materials which cost upwards of £5000 to erect and put in place, and which are at once capable of returning 200 tons of lead ore per month. There is an ample and never-failing supply of water-power, sufficient for working the mines to any required extent, which water-power is stored and regulated in a large reservoir.

The geological position of the Aberdovey Mines cannot be surpassed. They are in the very centre of the great lead basin of North Wales, being about equidistant from the Lisburne Mines on the south, from the Van Mine on the east, and from the popular Carnarvonshire Lead Mines on the north, and they are only about 2½ miles from the Port of Aberdovey, and rather a less distance from the railway station of Towyn; indeed, the directors have no hesitation in expressing their belief that the position of these mine, is, in many respects, superior to that of the Van Mines when purchased a year ago by the present company, nor do they fear predicting an approximate success for the Aberdovey Mines within an equally short period.

The mines are held for the usual period of 21 years (a new lease for that term is be granted) from the trustees of the Ynysymaengwyn estate, at a royalty of one-fifteenth. While working on a very narrow and limited scale, by private individuals, for about a period of upwards of 15 years, large returns of lead were made, of a portion only of which, however, authentic particulars are now available. The accounts now accessible show returns from 1855 to 1862, amounting to 1208 tons 16½ cwts., of the money value of £15,053 10s., on the raising of which considerable profits were realised.

The following reports from eminent mining engineers, especially conversant with the lead mining districts of North and Central Wales, speak sufficiently of the value and present position of the Aberdovey Mines, which have been acquired by the present company for the extremely moderate consideration of £12,000, £6000 of which is to be paid in cash, and £6000 in fully paid up shares of the company, by virtue of an agreement dated April 1, 1870, between Francis Thomas of the one part, and the Aberdovey Mines Company (Limited) of the other part.

REPORTS.

From Capt. SAMPSON TREVETHAN, Sen., formerly principal mine agent under Messrs. John Taylor and Sons, and manager of the Goginan Mine during the period of its great richness.

I have carefully inspected the above mine, and beg to hand you the following particular:—This mine is situated within 3 miles north of Aberdovey, a good shipping port, and a railroad is also within a mile from the sett, where materials of all descriptions, with lead ore, &c., can be conveyed from 3s. to 4s. per ton. This mine has been laid open to a depth of 42 fathoms under the adit level, which is about 55 fathoms from surface; the run of this lode is about 20° east of south and west of north, with an underlay of 2 feet in a fathom north, and will average 2 feet in width, composed principally of a clay-slate, blende, quartz, and lead ore. At the 42 fathom level a cross-cut has been driven north of the engine-shaft, and the lode intersected and driven on for 5 fathoms. When the large slide that traverses the mine was met with, which is about 2 fms. wide, this had a tendency to heave the lode from its right bearing, and to much discorder it for several fathoms in extent; the lode had been driven on about 10 fathoms after passing through the slide, where it is very large, with a slight mixture of lead ore; but, as there is a large portion of the lode still standing in this level, I am of opinion that the winze sinking from the level above, now down 5 fathoms, and in a good lode, yielding a ton of ore per fathom, will come down by the side of the level above-mentioned; this lode has been laid open from surface to a 12 fm. level, which proved very productive; from thence to a 22 fm. level, where the lode had a promising character, and yielded large quantities of lead ore; thence to a 32 fm. level, where the lode was equally productive; here another lode was met with running north-west and south-east, and at the junction made a large mass of ore for many fathoms in length, which ore ground is still standing in the bottom. Another lode has been intersected in the 22 fm. level, called Tate's lode, running east and west, composed of light clay-slate, with a large quantity of carbonate of lime, spotted with copper and lead ores, averaging about 4 feet wide, and so far as it has been seen, about 8 fathoms in extent, has a most promising appearance. As this sett is very extensive, being at least a mile on the course of the lode, and about the same in breadth, several other lodes have been discovered traversing this locality, and judging from the appearance of the lodes at the different points above-mentioned, I believe, when fairly developed, it would prove a good and lasting concern to the shareholders. This mine has produced already 1200 tons of lead ore of fair quality. There are two large water-wheels erected on the mine for pumping, crushing, and dressing stuff, with all other necessary erections for dressing 200 tons of ore monthly, if it could be raised, with office, smithy, carpenter's shop, and other required buildings. Any other information I shall be happy to give.

S. TREVETHAN, Sen.

From Capt. J. HOSKING, of Machynlleth, a mining engineer of 33 years standing, and of great experience in Welsh mining.

In reply to your enquiries relating to the Aberdovey Lead Mines, situated about 2½ miles north of the shipping port of Aberdovey, and the railway station of Towyn, I beg to inform you that, after a minute and careful inspection of the whole property, I came to the conclusion that a more valuable mining sett could not be met with, provided it was fully and fairly developed; and, although the mine was producing such large quantities of lead ore, there seemed to be no energy displayed in opening up the valuable discoveries east of the then present workings. In the adit level driven east the lode is large and well defined, impregnated throughout with lead ore of an excellent quality, the matrix being friable quartz, flookan, and carbonate of lime, quite congenial for making large quantities of lead ore in depth; and my candid opinion of the mine is that by sinking another 10 fathoms below the bottom level, and extending two levels east, the Aberdovey Mine will compete with most of the rich lead mines in this district. The advantages connected with the full development of this extensive mineral property are very great, good roads leading from the shipping port of Aberdovey and Towyn station to the mine. Timber for mine purposes can be had at a reasonable price, and materials of all kinds on moderate terms.

Machynlleth, Dec. 4, 1869. J. HOSKING.

From Capt. AARON EDE, some time resident agent at the Aberdovey Mines, whose report shows the exact position of the mine when last working.

For the last three months our workings have been chiefly directed to sinking the winze under the 32 fm. level, north of the cross-course, which I expect to get through this month to the 42. It is now down 8 fathoms; for the first 5 fathoms we had a good lode, averaging from 15 cwts. to a ton of lead ore per fathom. The lode still maintains its size, but falls in quality, producing a little lead, but not sufficient to value. The winze is sinking by four men, and two rising from the 42 at £11 per fathom; when we get through we can set two stopes in the winze, and send down and tram the stuff through the 42, when we have a good road. This can be done cheaper than stoping the "ore ground" under hand, and drawing it to the 32. The two men I mentioned that are now rising, I had them last month driving in the 42, trying for the south lode, but nothing as yet has been discovered. As soon as the winze is through I should recommend a little further trial to be made here, as I think by the appearance at present we shall shortly have the lode. You are aware our main lode is running from 20° to 30° east of south and west of north, and for a future working I should recommend the 42 to be driven south, and the 22 north. The 12 is in advance 25 fathoms of the 22, and in driving this we pass through some branches of ore, but the ground being disordered in this level, much ore could not be expected. We have discovered at the west end of your sett a very strong and kindly lode, chiefly composed of quartz, with particles of gold, lead, copper, and jack. A sample I have sent you by Mr. Davies, trusting you will not fail in having it assayed. We have opened a few pits on it. So far as I can see it is running east and west, and for the exploring it I should advise a level to be driven on the course of the lode, which will cost about £3 per fathom. In doing so I do not doubt but that we shall fall in with other lodes; one is to be seen about 10 fathoms north of us. The machinery is all in good order.

AARON EDE.

From Mr. JOHN JENKINS, miner, of Corris, near Machynlleth, who worked in the Aberdovey Lead Mines for many years.

I went to work upwards of 20 years ago to the Aberdovey Mines, and know the mines well. There is an engine-shaft, which was sunk first of all for 20 yards, and a level driven therefrom for about 50 yards each side. From here to the 12 fm. level was all pure ore ground, as was also from the 12 fm. level to daylight all ore ground. It was afterwards sunk 20 yards deeper—that is, from the 22 to the 32 fm. level—all of which was good and productive ore ground. It was afterwards sunk from the 32 fathom to the 42 fathom level (20 yards deeper). This was also ore ground, and is not yet worked out. My confirmed opinion is that the mine is more valuable to-day than ever, and if properly developed will produce profits to the shareholders second to no other mine in the district.

December 16, 1869. JOHN JENKINS.

IRON AND ITS OXIDES.

The mill and forge managers of South Staffordshire have, ever since 1866, been formed into an association for the interchange of information in connection with the trade, and for affording mutual assistance in the scientific part of their calling. In pursuance of these objects the association meet together at periodical intervals. Since the formation of the South Staffordshire Association the forge and mill managers of the Cleveland district have combined for similar purposes. The influence of each has been beneficial upon the other, and the South Staffordshire Association has recently determined, somewhat in the manner of the South Staffordshire and East Worcestershire Mining Engineers' Association, to work a little more vigorously. In pursuance of this aim the members assembled on Saturday evening, in Wolverhampton, to listen to a lecture on "Iron and its Oxides," by Mr. WALTER NESS, mining engineer, of Pelsall, the gentleman who read, at the last annual meeting of the Association of Mining Engineers already mentioned, the very valuable paper upon the Coal Field of Fife (see the Supplement to the *Mining Journal* of February 12).

The lecture was one of great merit, and showed a scientific as well as a practical acquaintance by the lecturer with the subject upon which he descanted. Mr. Ness demonstrated his acquaintance with the chemistry of the subject by numerous experiments of a very elucidative character. In opening his lecture, he said that it would be futile to attempt to consider the question fairly in a single lecture; he should, therefore, only briefly refer to some of the conditions in which iron existed before the hand of man operated upon it, and endeavour to follow it in some of its ramifications, till it appeared as a finished merchantable substance, suited to a multitude of uses, for which they could find no substitute in the mineral kingdom. When a substance became one of the staple productions of a community its progress was naturally onward and forward, and anything that would materially interfere with this course would paralyse the efforts of the people, and that this branch of industry had up to the present fulfilled the motto to the letter might be judged by the fact that during 1868 there was raised 10,169,231½ tons of ore, of an estimated value of 3,196,600*l*. In addition to this 114,639 tons of foreign were imported, which passed through, and was manufactured into pigs, with 560 blast-furnaces, and producing 4,970,206 tons of pig-iron, at an estimated value at the place of production of 12,425,515*l*. This was used partly for foundry purposes, and also by 247 mills and forges, which had in all 5903 puddling furnaces, and 831 rolling mills. These statistics of themselves were ample to lead them into a labyrinth of deductions, but if they would merely look back in the history of their iron manufactures for 100 years they found only a comparative trace of its existence. Like following a river to its source, they found the spring issuing forth in old Tubal Cain, and coming down to the present time like a mighty river that stretched almost from pole to pole; and as they followed it further, might its utility not widen? After sketching the numerous uses of iron, and the profusion with which it is scattered over the face of the globe, the lecturer said that the variety of substances with which iron ores were associated gave rise to a multitude of modes of application in order to perfect its ductility and tenacity. Iron in its finest state of division was pure, and all the trouble and much vexation experienced in bringing it out in its comparatively pure state was due to the associated substances with which it invariably was less or more mixed; for even after they had perfected iron it was not then absolute iron, but a mixture of iron, carbon, sulphur, phosphorus, arsenic, or manganese, or some other substance with which it was originally associated. To get rid of these, which a chemist would call foreign matters, was the great object of the wrought-iron manufacturer, and to do so involved two fundamental operations. First, the removal of impurities from the ore in bringing it into the state of crude metal; and, second, in working it up in a (common) puddling furnace, where it was triturated, to expose all the particles to the influence of the carbonic oxide atmosphere in order to make it fibrous. As long as these impurities existed the iron remained fluid in the furnace, but so soon as they were removed then the iron flowed no longer, became compact, and the work of the puddler was completed. (Hear, hear.) Now, seeing that the labour and loss which was consequent in order to bring up the quality to the finished standard were due in so great a measure to the quality of the pig metal, should it not be in its first production that they ought to look for the rectifying agencies? The real chemical difference between pig and wrought iron was in the amount of foreign matter present in each.

Here the lecturer advocated Hinde's a process of making iron and steel, as embracing conditions of purification of great value to the iron manufacturer. Many of the impurities which contaminated iron, although very inflammable, were difficult to oxidise, and be set free from the iron. Iron itself was fusible. [All this was abundantly illustrated.] The lecturer, in showing how iron might be purified in the puddling-furnace, said that with white iron manganese should be used to oxidise the foreign matter present, together with a high temperature, and under the iron an alkaline cinder. As a rule, the more carbon the easier the iron became liquid; and as the carbon passed off the greater heat was required to keep it liquid, and get other impurities expunged before malleability was attained, and the iron stuck together by its cohesion. Phosphate of iron, or cold-short iron, might be helped by black oxide of manganese, which yielded part of its oxygen and oxidised it and other foreign matters. After giving some memoranda of experiments made by Messrs. Calvert and Johnson upon the puddling of No. 3, which was rather grey iron, he then spoke of the Bessemer process, and said that one defect in it was that while the carbon was reduced to the minimum, sulphur and phosphorus remained in excess. An analysis of Bessemer's steel showed carbon in the minimum, and sulphur and phosphorus in the maximum, as compared with any other irons and steels by other systems of production. Therefore, the stirring in the puddling-furnace might in a mechanical form effect the change that was necessary to produce fibre instead of crystals. The metal, as did mostly all others, when melted and left to cool undisturbed, was crystalline. The test of the eye in deciding the quality of any iron must not be definitely relied upon. It had been laid down that good wrought-iron should be silvery white fibrous, having a fresh and somewhat reflex appearance in its fibres, and silky; when carbon was in excess, it had a bluish, and often grey colour; sulphur in excess, a dead colour, with a tinge of blue; silica, phosphorus, and carbon in excess, a bright colour, which was the more beautiful the more silica and phosphorus existed. The lustre of iron did not depend principally upon its colour; for pure iron, though silvery white, reflected little light. A small quantity of carbon in chemical combination, then phosphorus or silica increased the brilliancy of its lustre. Lustre was generally diminished by silica, lime, sulphur, magnesia, or carbon. The test which must be relied upon was ductility and malleability, with a due admixture of the eye tests just described. (Applause.)

The lecturer now courted questions; these were plentifully put by men who had evidently closely and intelligently followed the lecturer throughout the whole of his discourse. Their queries elicited an amount of information of a practicable character, which cannot but result in the advancement of the scientific manufacture of iron in the mills and forges of which the members of the association have the every-day control.

The lecturer, in acknowledging the very hearty vote of thanks which was passed to him, said that if in that district they had to commence the making of iron, their present knowledge would, no doubt, enable them to follow a course that would very much cheapen and simplify the manufacture. As to the period in the process during which he looked for most improvement, he specified the earlier or blast-furnace work; for it seemed to him that the greater amount of impurities which had to be dealt with at so much expense in the forge and the mill ought to have been got rid of before the iron left the blast-furnace.

—*Birmingham Daily Post.*

FUSING METALS.—The invention of Mr. H. BESSEMER, of Queen-street-place, relates to the supply of combustible gases or vapours to high pressure furnaces in such a manner that the employment of forcing-pumps and engine power is no longer rendered necessary for such purpose. The inventor uses the vapour or gas obtained from petroleum, creosote, coal oil, naphtha, or other liquid hydrocarbons, and he constructs a boiler or vessel in which the fluids are vaporised and retained under such pressure as will cause them to enter the high-pressure furnace by means of their own expansive force, although the gaseous products of such furnaces be retained at a pressure equal to several atmospheres in excess of the external atmospheric pressure.

FOREIGN MINING AND METALLURGY.

The various copper markets of the Continent appear to have slightly improved, but scarcely any advance has been established. The French tin markets present a favourable tone. Banca is quoted at 132*l.*; Straits at 130*l.*; and English, to be delivered at Havre or Rouen, 129*l.* per ton. In Holland, Banca tin has returned to a quotation of 75¼ fls., and Billiton might be bought at 74½ fls. The Society of Commerce has already a great stock on hand for the September sale. There is little change to notice in lead; zinc is also quiet upon all the markets, and prices have not experienced any sensible modifications.

The greatest activity still prevails in the French coal basins. Some old contracts have been renewed, and in some instances a "majoration" of prices has been enforced, resulting from the numerous engagements entered into previously by coalowners. There are scarcely any stocks, sales fully keeping pace with the extraction. The Paris coal market maintains a favourable tone; coal has, however, become rather less scarce in the French capital, in consequence of the considerable arrivals by navigations and railways which have taken place during the last few days. Uncertainties with reference to the future operation of the octrois have prevented some contracts being concluded. The revival which has appeared in the French iron trade has become more and more decided; everywhere orders are beginning to become abundant, and if some works have not a sufficiency of orders to fully employ their productive powers, this is simply due to the fact that their proprietors maintain an attitude of reserve in concluding contracts, considering that what may be deferred is not necessarily lost. In the Champagne district coke-made iron, which was neglected, has revived, in consequence of some rather important sales. Other descriptions have also given rise to well-sustained operations. An important contract for mixed pig, half coke-made, has been concluded at 4*l.* per ton, at the producing works; charcoal-made pig has been dealt in with firmness, at 4*l.* 16*s.* per ton. The foundries of the Champagne group have received some orders of ate. Thus the Bussy works are making six iron bridges for the Eastern of France Railway Company, 200 switches, and a certain quantity of castings for wagon construction purposes. The Meurthe and Moselle districts display favourable tendencies; refining pig is much sought after, and the orders received, added to contracts previously concluded, render producers very exacting. The Pont-à-Mousson works are making a considerable quantity of pipes for Paris; these works have four blast-furnaces lighted, and are producing at the rate of 600 to 700 tons per month. It is stated that M. Devienne proposes to construct in the Meurthe an establishment in which he would undertake the production of pipes on the Lavril system. The rolling-mills of the Meurthe and the Moselle are very actively employed, and quotations of iron are stationary, at 8*l.* 4*s.* per ton. We stated recently that MM. de Dietrich and Co. had ordered from MM. de Wendel the iron required for the construction of 500 trucks, which they are about to deliver to the Paris, Lyons, and Mediterranean Railway Company. It appears that MM. de Wendel will share the order with MM. Dupont and Dreyfus, and MM. Karcher and Westerman.

The Paris iron market presents confidence in the future, and shows considerable firmness. A rolling-mill of the Nord has just made an advance of 4*s.* per ton in merchants' iron, and is still only prepared to undertake engagements of short duration. The general opinion at Paris appears to tend not only in the direction of an advance in merchants' iron, but also in iron for building purposes, which will be still scarcer than last year, since some of the works producing this latter description propose to apply themselves instead to the manufacture of rails. In connection with certain lines proposed to be constructed in the North-East of France, we may note that 35,000 tons of rails have been ordered from the Vezin-Aulnoye Company at 8*l.* 2*s.* at the works, and 1800 tons of fish-plates at the rate of 8*l.* 18*s.* per ton; 90 tons of bolts and cramps have been ordered from the Vankalk house at the rate of 12*l.* 16*s.* per ton, delivered on the spot. The Northern of France Railway Company has ordered from the Creusot Works 2000 tons of Bessemer steel rails, at 11*l.* 10*s.* 3*d.* per ton, in warehouse at La Chapelle; it is still affirmed that the company proposes to replace iron rails with steel rails upon all its lines. The Northern of France Company has also ordered ten hydraulic cranes from the Marquise Company, at 15*l.* 4*s.* per ton, in warehouse at Marquise. The Western of France Railway Company has ordered 1000 tons of special cast-iron chairs for crossings from M. Doré, at 6*l.* 5*s.* 9*d.* per ton, in warehouse at Batignolles; 300 tons of Bessemer steel fish-plates from the Terre-Noire Company, at 10*l.* per ton, delivered at Batignolles; and 100,000 fish-plate bolts from the house of Levent and Co., at 14*l.* 6*s.* 6*d.* per ton, in warehouse at Batignolles. The Paris, Lyons, and Mediterranean Railway Company has ordered 1,000,000 cramps from MM. Briqueler and Loiseau, at 11*l.* per ton, delivered at Bercy. The Eastern of France Railway Company has ordered an iron bridge to be built of plates, and of 300 ft. opening, from MM. Joret and Co., at 16*l.* 10*s.* 3*d.* per ton; 100 tons of cast chairs from MM. Haldy, Roechling and Co., of Pont-à-Mousson, at 5*l.* 8*s.* per ton, in warehouse at that town; and 50 signal masts of MM. Vivaux and Co., at 22*l.* per ton, in warehouse at Petit-Narcois or Chinon. The Charentes Railway Company has ordered of the house of Charpentier, of Paris, twelve hydraulic cranes and six reservoirs to be built of plates. The price to be paid is 22*l.* 8*s.* per ton for the cranes and 24*l.* per ton for the reservoirs, to be delivered free in warehouse at La Rochelle. The Stenay Works, situated on the Meuse, and near the line of railway in course of construction from Sedan to Lerouville, have just been stopped. The proprietors, MM. Lallemand and Rivart, have leased the forge to MM. Philippe and Bradfer, whose speciality will be axles, for which a considerable outlet has been found on the Paris market. On the opening of the Sedan and Lérouville Railway the Stenay Works are expected to be again brought into activity.

Belgian metallurgy maintains a prosperous tone, and the current orders received daily by the works maintain the price of merchants' iron with great firmness. Plates, under the influence of rather important orders, display a serious upward tendency. The rolling-mills are actively completing the important orders which they have received from abroad, and which will occupy their means of production for several months more; in the interim, fresh contracts are confidently expected to present themselves. A good current sale continues to be noted in Belgium for coal for industrial purposes; but there is a certain falling off in the demand for domestic qualities, in consequence of the progress which spring weather has now made. Upon the whole, the aspect of affairs continues satisfactory, as is evidenced by the want of rolling-stock, which is still experienced on certain lines. The production of coke is still increasing, and it may be fairly said that it is assuming extraordinary proportions.

MANUFACTURE OF STEEL.—According to the invention of Mr. T. S. BLAIR, of Pittsburg, it is proposed to make any of the various oxides of manganese according to economic advantages, and reduce it to about the same degree of fineness to which iron or other oxide has been reduced that is to be employed in the manufacture of the conglomerate or "pig bloom." It may be in the form of powder, but as it is important that it should be well and evenly mixed through the ore, it will be found desirable to have the two materials of about an equal degree of fineness. To determine the quantity of oxide of manganese that should be employed it is best to commence with test mixtures, whereby to establish rules for the use of any particular materials that are to be operated with. There is such a wide variation in the composition and character both of the manganese and iron materials that no other method is safe. But it may be stated, in general terms, that a good test mixture to commence experimenting with is such as will give about 1 per cent. of metallic manganese to the weight of metallic iron in the pig bloom.

Great Fron Fownog Consolidated Lead MINING COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867, which limit the liability of each shareholder to the amount of his shares.

CAPITAL £20,000, IN 4000 SHARES OF £5 EACH.

10s. on application, 10s. on allotment, and £4 by calls of not exceeding 10s. each, quarterly, if required.

DIRECTORS.

DAVID DAVIES, Esq. (CHAIRMAN), No. 51, Catherine-street, Liverpool.
JOHN WILLIAMS, Esq., 13, Bently-road, Princes-park, Liverpool.
EDWARD RIGBY, Esq., 205, London-road, Liverpool.
JOHN S. DE WOLF, Jun., Esq., Clifton-park, Birkenhead.
ALLEN GREEN, Esq., Green-lane, Rock Ferry, Cheshire.
ROBERT YATES, Esq., Bradshaw-gate, Bolton.
ROBERT LOMAX, Esq., 73, Manchester-road, Bolton.
(With power to add to their number.)

BANKERS—NORTH AND SOUTH WALES BANK, AND BRANCHES.
AGENTS—LONDON AND WESTMINSTER BANK, Lothbury, London.
SOLICITOR—R. J. JONES, Esq., 5, Harrington-street, Liverpool.
MANAGER—Captain WILLIAM WASLEY, Fron Fownog, near Mold.
SECRETARY—E. J. HALE, Esq.

OFFICE,—ARVON CHAMBERS, 9, CANNING PLACE, LIVERPOOL.

PROSPECTUS.

This company is established to work and effectually develope the valuable lead mining property consisting of Summer Hill and Fron Fownog Mines, and adjoining lands (situate in the parish of Hendreblffa, near Mold, in the county of Flint), which have already been laid open, and proved to a considerable extent, indeed sufficiently so to justify as an investment the purchase and expenditure of about £9000, and which, it is confidently expected, will lay open paying ground sufficiently extensive to dispense with further calls, and establish a permanent dividend-paying property.

The directors have, therefore, much confidence in introducing this enterprise to the notice of their friends and the public, having effected the purchase of the entire property, including the Summer Hill Mines, for a sum of £5000—2000 shares half paid up—thus showing the great confidence of the lessees, as well as the directors, in the future of the undertaking. The total area of the ground is very extensive (above 200 acres), and the grants extend over a period of 21 years, at a royalty of 1-16th. The facilities for working are much more favourable than similar undertakings.

Upwards of £3000 worth of lead was raised at the Summer Hill Mine between January, 1866, and December, 1868, and £1200 was paid in dividends. A new shaft has been sunk, and the flat reached, from which it is expected that fresh runs of ore will soon be discovered.

The accounts of the Fron Fownog show that about £99,000 worth of ore was raised, and about £31,000 profit made, as will be seen from the reports of that mine which are annexed, and are highly promising, leaving little doubt of ultimate success.

The company's mines are bounded on the south by the Mold Consolidated Mines, and in the immediate neighbourhood of the Alexandra, Fron Isa, Fron Hall, Hendra Ucha, East Maes-y-Safn, Maes-y-Safn, Jamaica, Bryngwyn, and other noted mines, which have paid their shareholders many hundred thousand pounds profit. On the north are the Pant-y-Buarth, Pant-y-Newyn, Coed-y-Hendra, Great Rhosesmor, and other mines, which have also yielded enormous profits. Upwards of two-thirds—in fact, nearly three-fourths—of the shares have been already allotted to 67 shareholders; twenty of whom are resident in the immediate neighbourhood of the mine, and other parties in the locality have signified their intention of taking shares, thus showing the general good opinion entertained by all who know the property, added to which most of the prospectuses of mines in the neighbourhood speak in high terms of these mines.

Applications for shares to be made to R. J. JONES, Esq., the solicitor of the company, 5, Harrington-street, Liverpool; E. J. HALE, Esq., secretary, Arvon chambers, 9, Canning-place, Liverpool; or to J. H. COCK, Esq., broker to the company, 74, Old Broad-street, London.

The Aberdovey Mines Company (LIMITED).

Incorporated March, 1870, under the Companies Acts, 1862 and 1867, by which the liability of each shareholder is limited to the amount of his subscription.

CAPITAL £20,000, IN 20,000 SHARES OF £1 EACH.

Payable, 10s. on application, and 10s. on allotment.

Under the provisions of the Articles of Association of this company, shareholders can receive Share Warrants to bearer, issued under the provisions of the Companies Act, 1867, which may be passed from hand to hand like a bank-note, and by which all the trouble, expense, and delay of making, stamping, and registering transfers is avoided.

REGISTERED OFFICE, 37, SOUTH CASTLE STREET, LIVERPOOL.

DIRECTORS.

F. J. BROWN, Esq., St. Asaph.
THOMAS CARTWRIGHT, Esq., Bridge-street, Chester.
The Chevalier HARRY CLENCH, K.G.S., K.G.C., K.L.H., K.S.J., &c., Norwich.
HENRY DOBSON, Esq., Liverpool.
J. W. KELLY, Esq. (Messrs. Horn and Kelly), Liverpool.
G. J. WRIGHT, Esq., Chorlton-on-Medlock, Manchester.

BANKERS—ALLIANCE BANK (LIMITED), Liverpool.
SECRETARY—Mr. ROBERT JOHNSON, 37, South Castle-street, Liverpool.
BROKERS—Messrs. LISCOMBE and Co., Liverpool.

This company has been formed for the purpose of purchasing and working the well-known extensive leasehold property known as the Aberdovey Lead Mines, Merionethshire, North Wales, situated in the heart of the great lead region of the Principality, from which, during the last few years, so many enormous fortunes have been accumulated.

Although well known to those engaged in mining pursuits, it is only within the last year that the general public seem to have become alive to the unrivalled metalliferous deposits of the great central Silurian basin of Wales. The Van Mine, upon which only a few hundred pounds had been expended by the proprietors—two private gentlemen—and which, in consequence of the death of one of them, was sold, a little more than a year ago to a London company for something under £40,000, is at the present moment actively sought for on the London Stock Exchange at upwards of £86 per each 12,000th share, giving a total value for the mine of about £1,040,000, and showing a profit to the bold and fortunate purchasers of one million sterling in little more than 12 months. This is a great result, but still only one among the marvellous successes of Welsh lead mining. A glance at the Stock Exchange Share List will show numerous other mines, where, if the success has not been on quite so colossal a scale as at Van, yet within a few months investments of shillings have been turned into pounds; Tan-yr-Allt, Van Consols, Assheton, and many others shown in those lists are evidences of this; but the shares market alone, although thus showing profits which would seem almost fabulous were they not already realised, gives but a feeble idea of the enormous profits realised from investments in Welsh lead mining; for many of the present lead mines of the Principality are entirely in private hands, among which may be named the Dyffle Mine, which belonged at one time to the late Mr. Cobden, M.P., with whom became associated the Right Hon. John Bright, M.P., the Right Hon. Milner Gibson, formerly M.P. for Manchester, and many others, who, from their success in Dyffle, have become the leading capitalists of Lancashire.

The Aberdovey Mines are no new or purely speculative mines, nor, on the other hand, are they abandoned mines, the re-working of which could only be resumed at great cost; they are mines which have been working upwards of 15 years, which, although the workings have been suspended, have never been abandoned, have made great returns, and no inconsiderable profit. They are at present in full working order, being supplied with buildings, pumping, hauling, and dressing machinery, and a plant of materials which cost upwards of £5000 to erect and put in place, and which are at once capable of returning 200 tons of lead ore per month. There is an ample and never-failing supply of water-power, sufficient for working the mines to any required extent, which water-power is stored and regulated in a large reservoir.

The geological position of the Aberdovey Mines cannot be surpassed. They are in the very centre of the great lead basin of North Wales, being about equidistant from the Lisburne Mines on the south, from the Van Mine on the east, and from the popular Carnarvonshire Lead Mines on the north, and they are only about 2½ miles from the Port of Aberdovey, and rather a less distance from the railway station of Towyn; indeed, the directors have no hesitation in expressing their belief that the position of these mine, is, in many respects, superior to that of the Van Mines when purchased a year ago by the present company, nor do they fear predicting an approximate success for the Aberdovey Mines within an equally short period.

The mines are held for the usual period of 21 years (a new lease for that term to be granted) from the trustees of the Ynysymaengwyn estate, at a royalty of one-fifteenth. While working on a very narrow and limited scale, by private individuals, for about a period of upwards of 15 years, large returns of lead were made, of a portion only of which, however, authentic particulars are now available. The accounts now accessible show returns from 1853 to 1862, amounting to 1208 tons 16½ cwts., of the money value of £15,053 10s., on the raising of which considerable profits were realised.

The following reports from eminent mining engineers, especially conversant with the lead mining districts of North and Central Wales, speak sufficiently of the value and present position of the Aberdovey Mines, which have been acquired by the present company for the extremely moderate consideration of £12,000, £6000 of which is to be paid in cash, and £6000 in fully paid up shares of the company, by virtue of an agreement dated April 1, 1870, between Francis Thomas of the one part, and the Aberdovey Mines Company (Limited) of the other part.

REPORTS.

From Capt. SAMPSON TREVETHAN, Sen., formerly principal mine agent under Messrs. John Taylor and Sons, and manager of the Goginan Mine during the period of its great richness.

I have carefully inspected the above mine, and beg to hand you the following particulars:—This mine is situated within 3 miles north of Aberdovey, a good shipping port, and a railroad is also within a mile from the sett, where materials of all descriptions, with lead ore, &c., can be conveyed from 3s. to 4s. per ton. This mine has been laid open to a depth of 42 fathoms under the adit level, which is about 55 fathoms from surface; the run of this lode is about 20° east of south and west of north, with an underlay of 2 feet in a fathom north, and will average 2 feet in width, composed principally of a clay-slate, blende, quartz, and lead ore. At the 42 fathom level a cross-cut has been driven north of the engine-shaft, and the lode intersected and driven on for 5 fa homs. When the large slide that traverses the mine was met with, which is about 2 fms. wide, this had a tendency to heave the lode from its right bearing, and to much disorder it for several fathoms in extent; the lode had been driven on about 10 fathoms after passing through the slide, where it is very large, with a slight mixture of lead ore; but, as there is a large portion of the lode still standing in this level, I am of opinion that the winze sinking from the level above, now down 5 fathoms, and in a good lode, yielding a ton of ore per fathom, will come down by the side of the level above-mentioned; this lode has been laid open from surface to a 12 fm. level, which proved very productive; from thence to a 22 fm. level, where the lode had a promising character, and yielded large quantities of lead ore; thence to a 32 fm. level, where the lode was equally productive; here another lode was met with running north-west and south-east, and at the junction made a large mass of ore for many fathoms in length, which ore ground is still standing in the bottom. Another lode has been intersected in the 22 fm. level, called Tate's lode, running east and west, composed of light clay-slate, with a large quantity of carbonate of lime, spotted with copper and lead ores, averaging about 4 feet wide, and so far as it has been seen, about 8 fathoms in extent, has a most promising appearance. As this sett is very extensive, being at least a mile on the course of the lode, and about the same in breadth, several other lodes have been discovered traversing this locality, and judging from the appearance of the lodes at the different points above-mentioned, I believe, when fairly developed, it would prove a good and lasting concern to the shareholders. This mine has produced already 1200 tons of lead ore of fair quality. There are two large water-wheels erected on the mine for pumping, crushing, and dressing stuff, with all other necessary erections for dressing 200 tons of ore monthly, if it could be raised, with office, smithy, carpenter's shop, and other required buildings. Any other information I shall be happy to give.

S. TREVETHAN, Sen.

From Capt. J. HOSKING, of Machynlleth, a mining engineer of 33 years standing, and of great experience in Welsh mining.

In reply to your enquiries relating to the Aberdovey Lead Mines, situated about 2½ miles north of the shipping port of Aberdovey, and the railway station of Towyn, I beg to inform you that, after a minute and careful inspection of the whole property, I came to the conclusion that a more valuable mining sett could not be met with, provided it was fully and fairly developed; and, although the mine was producing such large quantities of lead ore, there seemed to be no energy displayed in opening up the valuable discoveries east of the then present workings. In the adit level driven east the lode is large and well defined, impregnated throughout with lead ore of an excellent quality, the matrix being friable quartz, flookan, and carbonate of lime, quite congenial for making large quantities of lead ore in depth; and my candid opinion of the mine is that by sinking another 10 fathoms below the bottom level, and extending two levels east, the Aberdovey Mine will compete with most of the rich lead mines in this district. The advantages connected with the full development of this extensive mineral property are very great, good roads leading from the shipping port of Aberdovey and Towyn station to the mine. Timber for mine purposes can be had at a reasonable price, and materials of all kinds on moderate terms.

Machynlleth, Dec. 4, 1869. J. HOSKING.

From Capt. AARON EDE, some time resident agent at the Aberdovey Mines, whose report shows the exact position of the mine when last working.

For the last three months our workings have been chiefly directed to sinking the winze under the 32 fm. level, north of the cross-course, which I expect to get through this month to the 42. It is now down 8 fathoms; for the first 5 fathoms we had a good lode, averaging from 15 cwts. to a ton of lead ore per fathom. The lode still maintains its size, but fails in quality, producing a little lead, but not sufficient to value. The winze is sinking by four men, and two rising from the 42 at £11 per fathom; when we get through we can set two stopes in the winze, and send down and tram the stuff through the 42, when we have a good road. This can be done cheaper than stoping the "ore ground" under hand, and drawing it to the 32. The two men I mentioned that are now rising, I had them last month driving in the 42, trying for the south lode, but nothing as yet has been discovered. As soon as the winze is through I should recommend a little further trial to be made here, as I think by the appearance at present we shall shortly have the lode. You are aware our main lode is running from 20° to 30° east of south and west of north, and for a future working I should recommend the 42 to be driven south, and the 22 north. The 12 is in advance 25 fathoms of the 22, and in driving this we pass through some branches of ore, but the ground being disordered in this level, much ore could not be expected. We have discovered at the west end of your sett a very strong and kindly lode, chiefly composed of quartz, with particles of gold, lead, copper, and jack. A sample I have sent you by Mr. Davies, trusting you will not fail in having it assayed. We have opened a few pits on it. So far as I can see it is running east and west, and for the exploring it I should advise a level to be driven on the course of the lode, which will cost about £3 per fathom. In doing so I do not doubt but that we shall fall in with other lodes; one is to be seen about 10 fathoms north of us. The machinery is all in good order.

AARON EDE.

From Mr. JOHN JENKINS, miner, of Corris, near Machynlleth, who worked in the Aberdovey Lead Mines for many years.

I went to work upwards of 20 years ago to the Aberdovey Mines, and know the mines well. There is an engine-shaft, which was sunk first of all for 20 yards, and a level driven therefrom for about 50 yards each side. From here to the 12 fm. level was all pure ore ground, as was also from the 12 fm. level to daylight all ore ground. It was afterwards sunk 20 yards deeper—that is, from the 22 to the 32 fm. level—all of which was good and productive ore ground. It was afterwards sunk from the 32 fathom to the 42 fathom level (20 yards deeper). This was also ore ground, and is not yet worked out. My confirmed opinion is that the mine is more valuable to-day than ever, and if properly developed will produce profits to the shareholders second to no other mine in the district.

December 16, 1869. JOHN JENKINS.

IRON AND ITS OXIDES.

The mill and forge managers of South Staffordshire have, ever since 1866, been formed into an association for the interchange of information in connection with the trade, and for affording mutual assistance in the scientific part of their calling. In pursuance of these objects the association meet together at periodical intervals. Since the formation of the South Staffordshire Association the forge and mill managers of the Cleveland district have combined for similar purposes. The influence of each has been beneficial upon the other, and the South Staffordshire Association has recently determined, somewhat in the manner of the South Staffordshire and East Worcestershire Mining Engineers' Association, to work a little more vigorously. In pursuance of this aim the members assembled on Saturday evening, in Wolverhampton, to listen to a lecture on "Iron and its Oxides," by Mr. WALTER NESS, mining engineer, of Pelsall, the gentleman who read, at the last annual meeting of the Association of Mining Engineers already mentioned, the very valuable paper upon the Coal Field of Fife (see the Supplement to the *Mining Journal* of February 12).

The lecture was one of great merit, and showed a scientific as well as a practical acquaintance by the lecturer with the subject upon which he descanted. Mr. Ness demonstrated his acquaintance with the chemistry of the subject by numerous experiments of a very elucidative character. In opening his lecture, he said that it would be futile to attempt to consider the question fairly in a single lecture; he should, therefore, only briefly refer to some of the conditions in which iron existed before the hand of man operated upon it, and endeavour to follow it in some of its ramifications, till it appeared as a finished merchantable substance, suited to a multitude of uses, for which they could find no substitute in the mineral kingdom. When a substance became one of the staple productions of a community its progress was naturally onward and forward, and anything that would materially interfere with this course would paralyse the efforts of the people, and that this branch of industry had up to the present fulfilled the motto to the letter might be judged by the fact that during 1868 there was raised 10,169,231½ tons of ore, of an estimated value of 3,196,600*l*. In addition to this 114,639 tons of foreign were imported, which passed through, and was manufactured into pigs, with 560 blast-furnaces, and producing 4,970,206 tons of pig-iron, at an estimated value at the place of production of 12,425,515*l*. This was used partly for foundry purposes, and also by 247 mills and forges, which had in all 5903 puddling furnaces, and 831 rolling mills. These statistics of themselves were ample to lead them into a labyrinth of deductions, but if they would merely look back in the history of their iron manufactures for 100 years they found only a comparative trace of its existence. Like following a river to its source, they found the spring issuing forth in old Tubal Cain, and coming down to the present time like a mighty river that stretched almost from pole to pole; and as they followed it further, might its utility not widen? After sketching the numerous uses of iron, and the profusion with which it is scattered over the face of the globe, the lecturer said that the variety of substances with which iron ores were associated gave rise to a multitude of modes of application in order to perfect its ductility and tenacity. Iron in its finest state of division was pure, and all the trouble and much vexation experienced in bringing it out in its comparatively pure state was due to the associated substances with which it invariably was less or more mixed; for even after they had perfected iron it was not then absolute iron, but a mixture of iron, carbon, sulphur, phosphorus, arsenic, or manganese, or some other substance with which it was originally associated. To get rid of these, which a chemist would call foreign matters, was the great object of the wrought-iron manufacturer, and to do so involved two fundamental operations. First, the removal of impurities from the ore in bringing it into the state of crude metal; and, second, in working it up in a (common) puddling furnace, where it was triturated, to expose all the particles to the influence of the carbonic oxide atmosphere in order to make it fibrous. As long as these impurities existed the iron remained fluid in the furnace, but so soon as they were removed then the iron flowed no longer, became compact, and the work of the puddler was completed. (Hear, hear.) Now, seeing that the labour and loss which was consequent in order to bring up the quality to the finished standard were due in so great a measure to the quality of the pig metal, should it not be in its first production that they ought to look for the rectifying agencies? The real chemical difference between pig and wrought iron was in the amount of foreign matter present in each.

Here the lecturer advocated Hinde's a process of making iron and steel, as embracing conditions of purification of great value to the iron manufacturer. Many of the impurities which contaminated iron, although very inflammable, were difficult to oxidise, and be set free from the iron. Iron itself was fusible. [All this was abundantly illustrated.] The lecturer, in showing how iron might be purified in the puddling-furnace, said that with white iron manganese should be used to oxidise the foreign matter present, together with a high temperature, and under the iron an alkaline cinder. As a rule, the more carbon the easier the iron became liquid; and as the carbon passed off the greater heat was required to keep it liquid, and get other impurities expunged before malleability was attained, and the iron stuck together by its cohesion. Phosphate of iron, or cold-short iron, might be helped by black oxide of manganese, which yielded part of its oxygen and oxidised it and other foreign matters. After giving some memoranda of experiments made by Messrs. Calvert and Johnson upon the puddling of No. 3, which was rather grey iron, he then spoke of the Bessemer process, and said that one defect in it was that while the carbon was reduced to the minimum, sulphur and phosphorus remained in excess. An analysis of Bessemer's steel showed carbon in the minimum, and sulphur and phosphorus in the maximum, as compared with any other irons and steels by other systems of production. Therefore, the stirring in the puddling-furnace might in a mechanical form effect the change that was necessary to produce fibre instead of crystals. The metal, as did mostly all others, when melted and left to cool undisturbed, was crystalline. The test of the eye in deciding the quality of any iron must not be definitely relied upon. It had been laid down that good wrought-iron should be silvery white fibrous, having a fresh and somewhat reflex appearance in its fibres, and silky; when carbon was in excess, it had a bluish, and often grey colour; sulphur in excess, a dead colour, with a tinge of blue; silica, phosphorus, and carbon in excess, a bright colour, which was the more beautiful the more silica and phosphorus existed. The lustre of iron did not depend principally upon its colour; for pure iron, though silvery white, reflected little light. A small quantity of carbon in chemical combination, then phosphorus or silica increased the brilliancy of its lustre. Lustre was generally diminished by silica, lime, sulphur, magnesia, or carbon. The test which must be relied upon was ductility and malleability, with a due admixture of the eye tests just described. (Applause.)

The lecturer now courted questions; these were plentifully put by men who had evidently closely and intelligently followed the lecturer throughout the whole of his discourse. Their queries elicited an amount of information of a practicable character, which cannot but result in the advancement of the scientific manufacture of iron in the mills and forges of which the members of the association have the every-day control.

The lecturer, in acknowledging the very hearty vote of thanks which was passed to him, said that if in that district they had to commence the making of iron, their present knowledge would, no doubt, enable them to follow a course that would very much cheapen and simplify the manufacture. As to the period in the process during which he looked for most improvement, he specified the earlier or blast-furnace work; for it seemed to him that the greater amount of impurities which had to be dealt with at so much expense in the forge and the mill ought to have been got rid of before the iron left the blast-furnace.

—*Birmingham Daily Post.*

FUSING METALS.—The invention of Mr. H. BESSEMER, of Queen-street-place, relates to the supply of combustible gases or vapours to high pressure furnaces in such a manner that the employment of forcing-pumps and engine power is no longer rendered necessary for such purpose. The inventor uses the vapour or gas obtained from petroleum, creosote, coal oil, naphtha, or other liquid hydrocarbons, and he constructs a boiler or vessel in which the fluids are vaporised and retained under such pressure as will cause them to enter the high-pressure furnace by means of their own expansive force, although the gaseous products of such furnaces be retained at a pressure equal to several atmospheres in excess of the external atmospheric pressure.

WATSON BROTHERS' MINING CIRCULAR.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and foreign mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a price-list (as supplied, also, to most of the London daily papers), giving the closing prices of mining shares up to 4 o'clock.

They also buy and sell shares for immediate cash or for the usual fortnightly settlement in all mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal, also, on the same terms, in the public funds, railways, telegraphs, and all other securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

On the arrival of the West India, Australian, and other mails special information will be forwarded to their clients interested in foreign mines, particularly Australian United, Chontales, Pacific, Eureka, &c., &c.

MESSRS. WATSON BROTHERS return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for nearly 30 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in that paper.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS, they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

WATSON BROTHERS,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

"SALTING."—A correspondent in Nevada, U.S., one long resident there, writes us upon the system of "salting," which, unfortunately, he says, prevails to a considerable extent in California, and is not likely to decrease so long as gold and silver mines are wanted by promoters of companies for the English market. His attention, he says, was called a few months ago to the extraordinary results of an assay of gold ore advertised in the *Mining Journal*, and, without doubting for a moment that the produce given was a fair one of the *sample assayed*, he proceeds to show how, in some cases, such samples have been produced, and to such an extent that the people of New York have now quite a horror of Californian "concessions," and this accounts, perhaps, for so many of them being brought to London. An American once told us, with a very serious face, that there was as much gold discovered in a Californian concession he offered us as there was as that moment in the cellars of the Bank of England, and hearing this we at once decided to have nothing to do with it—for, as we asked him, if what you say be true, why do you come to England to sell such a property? And after what our correspondent now writes we shall look with a strong suspicion on *very rich* samples of gold veins. Of course, his remarks only apply to a certain class of Californian speculators, who adopt any stratagem that ingenuity can devise in order to sell their concessions at extravagant rates—for, as he adds, "from a general point of view, no necessity whatever exists for salting." He has inspected some hundreds of mines, and adds, "there are a sufficient number of sufficiently good mines, if properly selected, to satisfy the expectations of English capitalists, without this nefarious practice." But what, our readers may have been wondering all this time, is "salting?" Well, then, it is *putting gold into veins before agents inspect and take samples of them!* Gold-bearing veins are porous; and in California one of their invariable constituents is oxide of iron. Gold, therefore, made fine by filing, or retorted gold from a mill, can be easily disguised by acids, and inserted in the veins without fear of detection. Nitrate of silver in solution turns such particles of gold black, and when mixed with earthy matter or oxide of iron, the *deception* cannot be found out by the eye, or even by assaying. But as competent metallic miners can, by a minute investigation of the ores by pulverising, washing, and other processes they well know of, detect when "salting" has been resorted to, our correspondent thinks that much good may arise by our calling public attention to the matter. He also calls our attention to another point of considerable importance, which is that the assay value of gold is not always a criterion of the amount that may be secured by amalgamation. It sometimes happens that less than 25 per cent. of the assay value is the resulting amalgam—the greater portion of the gold in such cases being coated with base metals, utterly repellent of mercury, and no extent of grinding can ever produce coalescence. There are methods of treating successfully such ores, but they differ from each other as much as they do from the common system of pan amalgamation; and hence, to avoid unnecessary expense and delay, agents should be well acquainted with such peculiarities at the commencement of operations.

BARYTES.—The value of this depends entirely upon the quality; the sulphate should be pure white, and if stained with iron is almost valueless. We know that referred to, and it will not do. The Mines Purchase and Finance Company are shipping large quantities of good white sulphate to different manufacturers, and we shall be glad to send a sample and details to "A. R. S. M."

SATURDAY.—The chief transactions were in Tankerville, Van Consols, Prince of Wales, and East Lovell. Tankerville, 14 to 15; Van Consols, 3⅝ to 3⅞; Prince of Wales, 16s. to 18s.; East Lovell, 22 to 23, ex div. 2*l.* per share; Great Retallack, 20s. to 30s.; Australian United, 3 to 3¼; General Brazilian, 18s. to 20s.; Taquaril, 18s. to 20s.; Pacific, 8¼ to 8¾; West Chiverton, 55 to 57; Providence, 38 to 40.

MONDAY.—Very little doing in the market, the dealers being busy preparing for the settlement. Van, 75 to 80; Van Consols, 3⅝ to 3⅞; Tincroft, 29 to 31; West Chiverton, 55 to 56; West Frances, 36 to 38; Great Retallack, 20s. to 30s.; West Maria, 2¼ to 1⅛; Agar, 2¼ to 2¾; Australian United, 3 to 3¼; Don Pedro, 4⅞ to 5⅛; Guerrero, 7s. 6d. to 12s. 6d.; Grenville, 1⅞ to 2⅛; East Grenville, 2 to 2¼; Great Laxey, 17 to 18; Great Vor, 11½ to 12½.

TUESDAY.—Market firm. Tankerville, Van Consols, Agar, and East Lovell shares in demand, at an advance. Tankerville, 15 to 16; Van Consols, 3¾ to 4; Wheal Agar, 2½ to 2¾; East Lovell, 24 to 25; Prince of Wales, 15s. to 17s. 6d.; North Treskerby, 12s. 6d. to 15s.; Tincroft, 29 to 31; Pacific, 8¾ to 9¼; Australian United, 2⅞ to 3⅛; Don Pedro, 4⅞ to 5⅛; Chiverton, 4⅛ to 5; West Chiverton, 55 to 56; Bronfloyd, 4 to 4¼; Bwich, 3½ to 3¾.

WEDNESDAY.—Settling day. There is a fair amount of business doing to-day in Van Consols, East Lovell, Tankerville, Basset, Pacific, Drake Walls, Agar, and Prince of Wales shares. Van Consols, 3⅝ to 3⅞; East Lovell, 24 to 25; Tankerville, 15 to 16; Basset, 55 to 65; Pacific, 8¾ to 9¼; Drake Walls, 22s. 6d. to 27s. 6d.; Agar, 2⅝ to 2⅞; Prince of Wales, 16s. to 18s.; West Frances, 37 to 39; Australian United, 3 to 3¼; Don Pedro, 4½ to 4¾; General Brazilian, 17s. to 19s.; Providence, 38 to 40; West Maria, 2 to 2¼; Grenville, 1⅞ to 2⅛; Chiverton Moor, 5 to 5½; North Crofty, 2½ to 2¾; New Lovell, 2 to 2¼; East Grenville, 2 to 2¼; Great Vor, 11½ to 12¼.

THURSDAY.—Good demand for Bwich Consols, Agar, Tankerville, Great Laxey, Prince of Wales, and East Lovell at an advance. Bwich Consols, 3¾ to 4¼; Agar, 2⅝ to 2⅞; Tankerville, 16 to 17; Great Laxey, 18 to 19; Prince of Wales, 16s. to 18s.; East Lovell, 24½ to 25½; Australian United, 2⅞ to 3⅛; Pacific, 8¼ to 8¾; Seton, 25 to 27; Basset, 55 to 60; West Maria, 2¼ to 2½; Van, 75 to 80; Van Consols, 3⅝ to 3⅞; Providence, 38 to 40; West Chiverton, 55 to 56; West Frances, 36 to 38.

CHEMICALS, MINERALS, AND METALS—(Messrs. J. Berger Spence and Co., Manchester, April 14).—Soda: The firmness noticeable in caustic soda has been maintained, and this week there has been more enquiry. White 60 per cent. is 13*l.* 5*s.* Soda ash is also in better demand at 1 11-16d., to 1¾d. per degree. Crystals are active at 3*l.* 17*s.* 6*d.* to 4*l.* Bi carbonate quiet, at 9*l.* to 9*l.* 10*s.*, and 15*l.* for refined. Saltcake wanted at 5*s.* Sulphate of soda, 3*l.*—Nitrate of soda firm at 16*l.* 5*s.* to 16*l.* 10*s.*—Potash: Muriate is still firm at 8*l.* 2*s.* 6*d.* to 8*l.* 7*s.* 6*d.* f.o.b.—Saltpetre: More business done in foreign at 22*s.* 3*d.* to 26*s.* 9*d.* English refined continues to bring 27*s.* 6*d.* to 28*s.*—Alum: The demand for this product is very active, and prices remain steady at 6*l.* 5*s.* for loose lump, and 7*l.* in export barrels; ground at 7*l.*—Ammonia: The demand for white and grey is still rather quiet. Brown is well sold, and prices are firm at 13*l.* 10*s.* to 15*l.* 10*s.*, according to quality. Muriate scarcer at 23*s.*—Copperas: Although prices remain almost unchanged, there is an active demand for dry at 5*s.*; green and rusty are selling at 52*s.*—Arsenic: This is in request at 7*l.* and 7*l.* 5*s.* for fine powdered.—Acid: Business has been done in tartaric at 1*s.* 2½*d.* to 1*s.* 3*d.*; oxalic remains rather dull at 7½*d.*; sulphuric 3*l.* 15*s.* per ton.—Pitch: There is no change to report, and continental orders are withheld in the hopes that sellers will submit to a further reduction.—Benzole: The sales in this article are limited. Prices tend downwards, and less than 2*s.* 6*d.* per gallon for 90 per cent. is taken.—Guano: For best Peruvian 15*l.* 7*s.* 6*d.* to 15*l.* 15*s.* is still obtained.—Disinfectants: Prices remain unchanged. Carbonic acid meets with a slacker demand at 1*s.* to 1*s.* 3*d.* per lb. Patent disinfectants at 5*l.* per ton for corporations.—Pyrites: This week there has been an attempt to fix higher prices, but it appears to have failed, and prices remain as before. Calcined, 12*s.* 6*d.* R.C.—Lime: Mineral phosphates are reported steady at 56*s.* for 65 per cent. Super-phosphates firm at 4*l.* to 4*l.* 5*s.* Bleaching powder is in good demand at 7*l.* 15*s.* to 8*l.* 5*s.* for 35 per cent.—Manganese: Dulness still characterises this mineral, and prices vary from 84*s.* to 85*s.* for 76 per cent.—Iron ore: There is a good market for both hematite and oolitic, prices for the former being 13*s.*, and for the latter 6*s.* 6*d.* to 6*s.* 8*d.*—Iron: Scotch pig iron selling freely at 57*s.* to 57*s.* 3*d.*; Cleveland brands very firm at 49*s.* for Forge 4, to 53*s.* 6*d.* for No. 1; Welsh bars, 6*l.* 10*s.* to 6*l.* 15*s.*; Staffordshire bars, 7*l.* 10*s.* to 8*l.*; gas tubes, 60 to 67½ per cent. off list; boiler tubes, 40 to 42½ per cent.—Copper firm. English tough ingot, 71*l.* to 72*l.*; Chili slab, 67*l.*—Tin has advanced considerably, and our quotations are, nominally, English ingots, 132*l.* to 133*l.*; Straits, 130*l.*—Lead quiet. P.G. English soft pig lead, 19*l.*—Spelter: Demand slightly improved. English, 19*l.* 10*s.* to 20*l.* Silesian, special brands, 19*l.* 10*s.* to 20*l.*

Meetings of Mining Companies.

GREAT LAXEY MINING COMPANY.

The half-yearly general meeting of shareholders was held at the London Tavern, on Wednesday,—Mr. DUMBELL in the chair.

The SECRETARY read the notice convening the meeting.

The report of the directors was read, as follows:—

The directors have nothing very material to report as to the mine, which continues to progress very satisfactorily, but it is perhaps advisable to refer to the rate of dividend lately paid to the shareholders, as there is reason to believe the subject has caused some excitement and anxiety amongst the shareholders. It is well known that for several years Great Laxey has paid quarterly dividends at the rate of 50 per cent. per annum, and it is beyond the possibility of doubt that those dividends were strictly paid out of the earnings of the mine. When, however, the question arose as to payment of the quarterly dividend in December last, the directors upon examination were of opinion that from the falling off in the produce of lead, and the continued depression of prices in the metal market (affecting particularly the price of blende), the actual profits of the mine for that quarter did not justify payment of a dividend at the former rate, and they, therefore, declared such dividend at the rate of 8*s.* per share instead of 10*s.*, or, in other words, at the rate of 40 per cent. instead of 50. This act of the directors was at first viewed with great dissatisfaction by many of the shareholders, and although the directors endeavoured to reassure them by means of a circular forwarded with the dividend warrants, yet a very unfavourable impression appeared to remain. It is, however, highly satisfactory that since that period the Chairman has received letters from a large number of shareholders expressing their approval of the course pursued by the directors. The dividend declared last month was at the old rate of 10*s.* per share, for the simple reason that the profits of the mine justified that payment. The directors wish to convince the shareholders that the discoveries in Great Laxey have secured such extensive "reserves," that there is not the slightest doubt of the mine continuing to yield good substantial dividends, although certainly liable from time to time to vary in amount. The shareholders will certainly believe that it is much more agreeable to the directors to give a uniform rate of dividend on the largest scale, but the directors will not be induced by any consideration of temporary approval to divide more than the mine had actually earned. The report of the managers is of a very satisfactory nature, and fully bears out the opinion expressed by the directors of the mine.

The report of Capt. Rowe (the manager) was read, as follows:—

April 7.—It gives us pleasure in being able to present you with the following half-yearly report:—Since your last general meeting we have not progressed with the sinking of the main engine-shaft below the 220 as fast as we expected, owing chiefly to the big wheel being frozen, and letting the water into the bottom for some time during the winter months; but the sinking is now going on steadily, and the lode at the shaft is worth 50*l.* per fm. In the 220 end the lode is thrown out of its course by a small slide, and there is only a part of it visible; up to the slide it was worth about 40*l.* per fm. We are glad to report a very great improvement in the 210 end north. At your last meeting we reported it worth 40*l.* per fm., and to-day it is worth 150*l.* per fm. The 200 end, driving north, is also looking well, worth 100*l.* per fathom, but the driving is impeded in consequence of the great quantity of water issuing from the lode. In the 190 we are only carrying a part of the lode, which is worth about 50*l.* per fathom. The 180 end, driving north, is worth 70*l.* per fathom. In the 165 end the lode is worth 40*l.* per fathom; we have intersected the eastern part of the lode by cross-cutting in the 155, but it is not so rich as we expected to find it, and we have resumed the driving on the western part; and, judging from the present bearing of the two, they will soon come together northwards, where we anticipate a rich bunch of ore. We are still opening out profitable ore ground in the 145 end driving north; during the past six months the lode has varied in value from 20*l.* to 50*l.* per fm., and is at present worth 20*l.* per fathom. In this northern part of the old mine there has been a great falling off in the value of some of our best stopes, in consequence of their entering within the influence of the big slide, and which during the past six months has somewhat interfered with the regularity of our lead samplings; but, seeing that all the ends have greatly improved on the north side of the slide, we have every reason to feel certain that the stopes will also improve as we advance in that direction.—South Ground: The lode in the 200, driving south from main engine-shaft, is unproductive. In the 190, driving south, the lode is producing a little copper, but scarcely enough to pay the expense of driving. The same may be said of the 165 south. The 60, driving south from the slide, towards the corner shaft, is yielding a little saving work for copper, and the four stopes we are working north of the slide are productive for lead and blende, varying in value from 3*l.* to 60*l.* per fathom.—Dumbell's Shaft: We have completed this shaft to the 155, cased and divided it, and commenced driving both north and south. Since your last general meeting the lode at the shaft has considerably improved, and in the bottom is now worth 50*l.* per fm.; the sinking is suspended for the present, in order to get the ends away and give room for the shaftmen to resume it, which they will be able to do in another month. The lode in the south end is worth 30*l.* per fm., and in the north end 100*l.* per fathom; the shaft is still perfectly dry, the water being drained from it by the 190 and 200 fm. levels, driving north from the deep mine. The 140 end is worth 50*l.* per fm.; there is a falling off in value in the lode in the end driving north in the 125; the lode is now worth about 30*l.* per fm.; this level has opened out about 60 fms. long of valuable ore ground. Since we have re-umed the driving of the 110 north no discovery has yet been made, but we consider this a trial of great importance. Above the 110 we have stopes working in the 70 worth from 40*l.* to 50*l.* per fm. In the 60 one stope is worth 60*l.* per fathom, and in the 50 two sets of stopes are worth on an average 40*l.* per fathom. In driving the 50 end north, which may be considered as new ground, we have discovered a short but rich bunch ore; the end just at present is poor, but the lode has every appearance of again shortly becoming productive. Agneash shaft is sunk 8 fms. below the 70, but having no lode at this shaft nothing new can be reported respecting it. Since some important alterations were made in the pump work the sinking of Glenroy shaft below the 37 fathom level has gone on with regularity; the shaft is now 6 fms. under the 37; the lode continues much the same in character—that of a soft clay-slate—yielding occasionally lumps of lead and blende. In driving the 37 north we have had a promising lode, yielding saving stuff for lead and blende; so far we have discovered nothing so good as the lode in the winze below the 25. We fully expect, however, in driving further north to come upon discoveries of greater value and importance.—Glen Level: Having now driven this cross-cut level so far west as in our opinion is altogether past the line of the run of the Great Laxey lode, without meeting with anything like the trace of it, we have suspended the driving, and intend during the summer months to make a further short trial on the surface by putting down some costean pits in advance of the present end. In thus briefly noticing the various operations of the company, with the prospects as presented at this moment, which we have desired rather to under than over-rate, we in conclusion beg to recall your attention to two points in our report—the 210, or bottom level north, on the ore ground in the deep mine, and also to the 155, or bottom level north, just reached in Dumbell's, where the ends are worth, the former 150*l.* and the latter 100*l.* per fathom for lead and blende. We think that these facts furnish unusual evidence in favour of the continued prosperity of these mines.—R. ROWE, J. BARKELL.

The CHAIRMAN said that every individual shareholder who was a man of business, or who understood the nature of companies at all, would be satisfied that the directors were pursuing the right and proper course in not declaring dividends if profits were not in hand with which to pay them; and he hoped no attempt would ever be made to deviate from such a wholesome principle. The returns from the mines were very good, even if they paid less than 50 per cent. upon the paid-up capital; at all times shareholders might feel assured that the directors would be only too glad to give the largest dividend that the mine earned; but so long as he had anything to do with the company no power on earth should tempt him to give more. (Hear, hear.) When the directors declared a dividend of 8*s.* instead of 10*s.* he received a number of letters, some of them couched in not very complimentary terms. They seemed to question whether there was not some stock-jobbing operation to bring down the shares to a low price to enable parties connected with the large holders to increase their interest, but it was very satisfactory to know that some who then questioned the propriety of the course adopted by the directors, after reflection, saw the wisdom of the policy adopted, and had written very handsome letters to that effect. He should like, however, upon this occasion to refer to the fact that the directors in their last report referred to, the possibility of such a contingency; therefore, it ought not to have taken the shareholders by surprise, seeing that the directors had anticipated the possibility of a decreased dividend. As to the present position of the mine, he thought the report of the managers showed a very satisfactory state of things; in truth, it was scarcely possible for anyone unacquainted with mines to have any idea as to the extent of the unworked ground, which was very properly called "reserves"—that is, ground actually driven through, varying in value from the amount of 20*l.* per fathom to 150*l.* per fathom. As to the extent of this ground, he could not pretend even to indicate, but he was quite sure that if every means that could be applied were used to extract that ground, there was no one in that room would live to see the time when it was exhausted. Variations in its value would be found, but that did not arise from the want of ore ground—hence it was that no one could accurately state what would be the actual value of that whole extent of the ore between those levels, but having ascertained its value in the "sole" as well as in the roof of the level, they certainly had a right to say that there was good ore between those levels, although it might, and would, vary in richness of produce. In the lowest level—the 210—driving north, there was a lode of the value of 150*l.* per fathom, while in another remote section—in what was called "Dumbell's"—in the 155 fm. level, the deepest level in that part of the mine, the lode was worth 100*l.* per fathom. Coupled with these facts, the main shaft, which was sinking below the 220, had never been without ore, and the lode was now worth 50*l.* per fathom. Any man, therefore, had a right to say that there was a great permanency in Great Laxey, although its produce might so vary as to compel the directors to vary the amount of dividend from time to time. He then proceeded to direct attention to the note appended by the auditors to the balance-sheet, stating that he said nothing to the auditors before that note had been appended, but he would now inform the shareholders that whatever might be the amount of stock taken credit for in this half-year had to be deducted from the produce of the mine during the next half-year—therefore, it made no difference whatever in the actual figures or balance. Shareholders had often asked, after perusing the half-year's balance-sheet, how, for instance, when the credit balance was 6351*l.*, the directors could pay a dividend of 7500*l.* He might state, in explanation, that these accounts were made up to Feb. 4, and the dividend was not payable till the end of March, so that there were nearly two months' produce to receive before the dividend was paid. He then moved—"That the report of the directors and managers be received and adopted, printed, and forwarded to the shareholders."

Capt. PAGET MOSELEY seconded the proposition.

Mr. PETER WATSON drew attention to the fact that the aggregate value of the shafts and ends, irrespective of stopes and winzes, was no less than 800*l.* per fathom. He considered great credit was due to the Chairman, as well as to Captain Rowe, who was a very able man, for the successful manner in which they continued to conduct the development of this great property. Certainly the shareholders should have confidence in their executive, at any rate, by the very large interest he held in the mine, showed his confidence in its permanent prosperity.—A SHAREHOLDER asked whether the system now adopted in the selling of blende answered the expectations of the directors?—The CHAIRMAN said that it answered admirably, and that they could easily sell double the quantity they were able to raise.

Capt. ROWE, replying to a question from Mr. EDWARD COOKE, stated that the full width of the lode in the bottom levels was about 8 ft., of which about 2 ft. was carried. He calculated the lode to be worth 6 tons of lead per cubic fathom, and the remainder of the value for blende.

Mr. EDWARD COOKE thought it was but a meed of justice due to the Chairman to state that it was a paramount advantage to have such a gentleman to preside over the proceedings of a mining company. He knew but one other gentleman, and that was the Chairman of Great Wheal Vor, who was so fully acquainted with mine workings, and so well able to explain to shareholders the position and prospects of the respective points of operation. Surely it must be beneficial to the true interests of any mining enterprise that its administration should be headed by one so *au fait* in such matters, and equally true must it be that were it more the rule than the exception the pursuit of mining as a legitimate and profitable channel of investment would be far better understood and appreciated. (Hear, hear.)

Capt. ROWE, in reply to further questions, stated that the mine as worked was fully one mile in length. From one shaft to another was a distance of 352 fms., and the deepest points of operation in each shaft were the richest parts of the mine. While it was impossible to estimate the real value of the reserves, it might with certainty be stated that there was a continuous course of ore for 200 fathoms in length.

The CHAIRMAN said that all connected with the company were much indebted to any shareholder understanding mining who came forward and asked questions which elucidated points that could not fail to be other than interesting information to the shareholders at large.

The motion adopting the reports and balance-sheet was put and carried unanimously. Unanimous votes of thanks were passed to the Chairman, directors, and also to Capt. Rowe. The meeting then separated.

GREAT NORTH LAXEY MINING COMPANY.

The annual general meeting of shareholders was held at the offices, Austinfriars, on Tuesday,—Mr. BULLER in the chair.

The notice convening the meeting was read.

The report of the directors stated that the quantity of ore sold in the year has been 160 tons, for 2158*l.*, against 115 tons, for 1517*l.*, in the previous year. The total sold by the present company has been 504 tons, for 6807*l.* The whole of the 2500 additional ordinary shares of 1*l.* each, created last year, have been issued, and the full amount paid up on the same. But the amount at credit up to the end of January was only 1541*l.* 7*s.* 6*d.* In a few days from this date there will be another 40 tons of ore ready for sale, which will probably realise about 540*l.* The February cost amounted to 302*l.* It will be observed by Capt. Rowe's report that he again requires further capital to open the mine in a proper manner, and with a view to develope it in a way to make the property a profitable and permanent one. It is disappointing to the directors to have to make this statement, but they have no alternative but to do so. They, however, wish to add that the Isle of Man shareholders (holding 2378 shares out of the total of 2769 shares held in the Island) and the directors have already expressed their willingness to subscribe for their proportion of this further capital, if the Crown authorities, representing the lessor, will meet the company in a fairly liberal spirit as to the royalty, considering the many years the mine has been at work, and the large sum spent, without success. The directors are in communication with Her Majesty's Commissioners of Woods and Forests on the subject, and they hope to call an extraordinary general meeting for an early day to report the result, and enable the shareholders to come to a decision on the course to be adopted.

The report of the agent was read, as follows:—

April 11.—In again presenting my annual report I will at once proceed to state the work done and the prospects developed since the general meeting in March last year. It will be remembered that I then attached much importance to the necessity of sinking the north shaft, and making it henceforth the main one for deepening and proving the mine. Upon this work we at once entered by putting down new rods and pumps, and have since sunk 9 fms. below the 58, rising 3 fms. from the roof of the 73, and sunk 11 fms. from the 73 to the 84. All the work has been done in a straight line, in order ultimately to form a part of the main shaft, but there still remain 38 fms. of rising and sinking yet to be done to complete this shaft to the 110. The drivings during the year have been as follows:—The 110 north 18 fms., the 96 north 25 fms., the 84 north 21 fms., the 73 north 23 fms., and we have also stoped in the roofs of these levels about 200 fms. of ground for ore. At surface we have taken abroad and completely repaired the old, or first, pumping-wheel, making it as good as new; this wheel is now entirely devoted to winding the stuff out of the mine. A new and substantial building has also been erected, containing a lead store, smithy, and office. The prospects opened up first in the 110 north have been but little added to since the last meeting, accounted for by the level not having been driven far enough north to overtake the run of ore ground, which is now proved to be steadily dipping in that direction. The 96 has just now entered upon this bearing ground; at present the lode is 3 ft. wide, and worth 15 cwts. of lead per fathom. In the 84 we have laid open ore ground northwards 26 fms. in length, varying in value from 10 cwts. to 1 ton of lead per fathom. This run of ground I am anxious to lay open as speedily as possible at the 96 and 110, and in a similar successive manner below by means of the north shaft. At the 73 the length of this ore ground is 12 fms., worth about 10 cwts. of ore per fathom, showing that its value altogether diminishes as we rise, but in depth is steadily increasing both in length and bulk. I should here state that the lode in the bottom of the north shaft at present is 2 ft. wide, worth ½ ton of ore per fathom, and in the rise immediately under it at the 73 it is 4 ft. wide, worth ¾ ton per fathom. In the south part of the mine, at and below the 27, we have two stopes working, worth from 1 to 1¼ ton of ore per fathom, and there is every prospect that other and unexplored bunches of ore exist yet further in that direction, which in depth are likely to dip northwards, and should, therefore, be approached by driving one of the deep levels. In conclusion, I would add that although I am disappointed with the results attending the expenditure of the last 2500*l.* during the past year, which I hoped would have proved sufficient for the purposes then represented, I can only say that the deficiency has arisen mainly from the anxiety on my part to ask for the minimum amount of further capital, together with the mine having demanded a still greater depth and extension of the deep levels into the new ground. But so far as my opinion of the ultimate value of the mine is concerned, I can with increased confidence affirm that it has been abundantly strengthened during the latest operations; indeed, the prospects to which I have pointed are so far realised, as shown by the fact of the returns having been increased from 10 to 30 tons of ore per month. In submitting, therefore, the accompanying estimate for a further additional outlay, it is in the firm belief that, so far as it is possible to form a calculation, the amount which I have named will be ample to realise success.—R. ROWE.

The CHAIRMAN said the report just read showed that although the present deepest point of operation had not altogether disclosed the results anticipated at the last meeting, yet the ground showed an unmistakeable continuance of that gradual improvement which had taken place in the upper levels. In the 84 they had a course of ore for 26 fms. in length, and the 96 was entering the ore ground going down in the bottom of the 84, the lode being already worth ¾ ton per fathom, indicating that the course of ore would be found to extend in depth. As regarded the 110—the deepest point of operation—that level at present had not reached within 16 fms. of where the 96 was just entering the lode. Therefore, their prospects, he thought all would say, were encouraging; but as regarded their financial position, it would be seen by the reports that more capital would be required. According to an estimate prepared by their manager, something like 5000*l.* would be required for the new works. He concluded by moving the adoption of the reports and accounts.—Mr. TUXFORD seconded the proposition.

Mr. DUMBELL said that it was the opinion of the Manx shareholders, with some one or two exceptions, that the development of the mine should be continued, but that if it should be determined to wind-up the company the mine should be disposed of by public auction for the benefit of the whole of the shareholders without any reserve whatever, but no step could be taken in that direction until a special general meeting had been held. He might mention, however, that nearly the whole of the Manx shareholders were of opinion that this additional capital should be raised, and had declared their intention to subscribe their proportion, which example the directors would follow. (Hear, hear.) He then moved that the report and accounts be received and adopted. He was confident that the mine would succeed if properly and fairly worked. He was of opinion that the north shaft should be sunk, and that all other works in the mine were comparatively unimportant. It was satisfactory to know that those parties who were opposed to the views which he and others expressed at the memorable London meeting, were now most anxious that those views should be practically carried out—that is, the putting down of the north shaft. Throughout the district the ore dipped north, and his own opinion was that if the capital raised at the last meeting had been exclusively applied to that work Great North Laxey would at this time be paying its expenses, and that there would now be no necessity for raising further capital.

The CHAIRMAN said that the north shaft had been sunk 23 fms. during the year, and that it was not till within the last month, when the funds were running short, that it was intimated to Capt. Rowe the expenditure on that point must be lessened.—Mr. DUMBELL considered that 5000*l.* was the very smallest amount that should be raised, and was of opinion that the expenditure should not be applied to the extraction of ore, but for the development of the mine. The capital should be really applied for the purposes of getting down the north shaft, and to open out the mine in a true miner-like manner, with the view of making discoveries, or, more properly speaking, of rendering available the discoveries already made.

Mr. TAYLOR could indorse all that Mr. Dumbell had said with regard to the Manx shareholders. They were of opinion that the company should not be wound up, but they were equally of opinion that the Crown authorities should come forward and by considerable modification in the rate of the royalty encourage the shareholders to proceed with the development of the mine.

The motion adopting the reports were put, and carried unanimously.

A resolution was passed to the effect that the meeting approves of the course adopted by the directors in applying to the Crown authorities for a considerable modification of the rate of royalty, and request them to call an extraordinary general meeting to report upon the result of the application, and to consider and decide upon the course to be pursued. It was further resolved that the meeting approves of the carrying on of the mine by means of further capital, and is of opinion that in case the capital was not provided the mine should be offered for sale by public auction.

The CHAIRMAN mentioned that it had been thought by the directors the most equitable way to deal with the 5000*l.* additional capital would be to issue the shares with a preference of 15 per cent. out of the profits.

The retiring directors were re-elected, and Mr. Brandt was re-elected auditor.

Upon the proposition of Mr. DUMBELL, seconded by Mr. TAYLOR, a vote

anks was passed to the directors. A vote of thanks was also passed to Capt. ore for his zealous management of the mine.
A vote of thanks to the Chairman concluded the proceedings.

GWYDYR PARK LEAD MINING COMPANY.

A general meeting of shareholders was held at the offices, St. Michael's ouse, on Wednesday,—Mr. W. S. SUTTON in the chair.
The notice convening the meeting was read, and the minutes of e last were confirmed. A statement of accounts was submitted, hich showed a balance of liabilities over assets of 78*l.* 17s. 2d.
The report of the agent was read, as follows :—
April 12.—Since the last general meeting we have driven the Gwyn Llifian op adit 5 ft. 5 in., when it was considered to be extended far enough, therefore commenced to rise, and since that time have risen 2 fms. 2 ft. 7 in. up to end of last month. The ground in the rise at present is hard, and slow for progress, but showing a little more water. We are not carrying the lode with in rising. The jumper can be heard now so plain in the rise that I am of opinion we shall be able to bore a hole and unwater the shaft after this month. the Vucheslas deep adit we have driven 5 fms. 4 ft.; after driving the first ft. 9 in. we intersected a north and south lode, which I consider is part of e Vucheslas lode; it was about 1 foot wide, principally composed of mundic nd spar, with a little lead ore intermixed. While driving on its course it ound unproductive for lead ore, but a few feet back from the end we inter- ected some small branches of lead in the footwall, which I think is Harker's de, therefore we commenced to rise, and were up 1 fm. at the end of last month. he lode is about 7 in. wide, composed of spar, mundic, and blende, and carrying me stones of lead ore. After rising about 3 feet more I think we shall be able bore a hole and unwater Harker's old shaft.—WILLIAM SMYTH.

The CHAIRMAN drew attention to the fact that the important work hich had been so long in course of progress was now nearly com- leted; and although two years had elapsed since ore had been sold, ot by reason of the poverty of the mine, but solely on account of he work now being carried on to effect ventilation, the time was, he oped, not far distant when from realised results Gwydyr Park would e with many of the fashionable Welsh lead mines now so favour- bly regarded by the public.

Mr. NEWTON referred to the extent of the sett, and to its generally favourable prospects, stating that it was a mine well worthy of a spirited deve- opment.—A SHAREHOLDER wished to know if there was at present any point value?—The CHAIRMAN said that the one object they had had in view for ome time was to effect a communication with the shaft—that had been a long nd trying work, but, as indicated in the report, that important point would, n all probability, be effected in a few weeks. Without wishing to raise undue xpectations, he certainly thought they had reasonable grounds for believing hat satisfactory results would be realised, the mine containing, as it did, se- eral lead-producing lodes, upon which operations could be extended. They were assured that the lode upon which they would be able to operate, as soon as the ommunication had been effected, was worth 1 to 1½ ton per fathom; but as far s the mineral extent of the property was concerned, it might fairly be consi- ered as two mines.
The report was entered on the minutes, and the accounts were passed and al- owed, and a call of 9d. per share was made.
Messrs. J. Y. Watson, F.G.S., and Newton, were added to the committee of ma- agement. It was unanimously agreed that a special general meeting should e held on May 4, for the purpose of taking the necessary steps for registering he company, with 12,000 shares, with limited liability.
A vote of thanks to the Chairman terminated the proceedings.

WICKLOW COPPER MINE COMPANY.

At the meeting of shareholders, to be held in Dublin this day, the ollowing report will be read :—
In presenting their customary half-yearly report to the shareholders the di- ectors have, on this occasion, to lament that no improvement has taken place n the state of the alkali trade since the last general meeting, and that it has een necessary in the interim to still further reduce the price of the company's yrites, in order to maintain a position in the market. The apprehension ex- ressed in a recent report that a brisk competition between the principal pro- ucers of foreign pyrites was to be looked for during the year 1869 has been fully ealised, and the importations, as shown by the Board of Trade Returns to ec. 31, have enormously exceeded those of any preceding year, whilst the absence f a commensurate demand compelled holders to accept terms unprecedentedly ow. Under these circumstances the directors found it incumbent upon them lso to submit to reduced rates; and at the same time deemed it prudent to de- rease the production of pyrites, so as not to add to an already overstocked arket, where no disposition existed on the part of buyers to contract for for- ard delivery. As the shareholders are already aware, the pyrites raisings ave of late been further considerably diminished from another cause—the ecessity for dressing the ore to a higher percentage, which has involved the jection of such descriptions as have for the present become unmarketable. The uantity of iron ore raised in the past six months has been only 2000 tons, con- equent upon the interruption occasioned by precautionary operations (nearly ompleted) for securing the workings, as alluded to in Mr. Barnes' report; but uring the coming season every exertion shall be made to work the deposit of is ore to the best advantage, and the directors are happy to announce that ey have made satisfactory contracts for the current year, the quality of the re continuing in high estimation. With reference to the allusion in last report a project for the improvement of Arklow Harbour, the board regret to state hat no feasible plan towards that desirable object has as yet been submitted to heir notice. Your property in that locality continues in its usual condition, ith the exception of some trifling damage to the piers, occasioned by the recent evere weather, which can be repaired at small expense. The accumulation pon the mine of smalls and inferior ore has long been a source of great anxiety o the directors, who have continually endeavoured to find an outlet for these e- criptions, but latterly to no appreciable extent; hence they have been un- able to take any credit in the accounts for their nominal value. Various pro- ects have from time to time been put forward for their utilisation; but the in- apability of those ores to sustain combustion without the addition of fuel has hitherto proved an insurmountable obstacle towards the attainment of this end. It is now with considerable satisfaction that the directors have to inform the hareholders that a patented apparatus, completely overcoming, as alleged, the bove-mentioned obstacle, and fulfilling every requirement for the profitable reatment of these ores, has recently been brought under their notice, and fa- ourably reported upon by Mr. Barnes, who on two occasions has carefully in- pected its actual working at the manufactory of the patentee in England. The oard being fully impressed with the important advantages likely to be derived rom the possession of this patent, if proved to be applicable to the ores of this ompany, felt it their duty to enter into negociations, which have eventuated n the provisional purchase upon favourable terms of the patent rights over all reland, contingent upon its perfect success. The report of the resident director hows that the mine maintains its usual state of efficiency. The accounts show n estimated profit of 1733*l.* 9s. 3d., which, under existing circumstances, the irectors consider more advisable to retain in hand than recommend its appli- ation in payment of the small dividend it would afford.

THE VAN MINE.

It cannot fail to be satisfactory to the investing shareholders in this uly valuable mine to find it stated on all hands that the present onthly returns of ore, although large, cannot be accepted as an evi- ence of the actual producing capabilities of the property. There is he best authority for stating that ore is being discovered at ten imes the amount that is being taken away. The following report as just been made for parties entirely unconnected with the company:

Mount Pleasant, Tregaron, Cardiganshire, April 11.—Having, with yourself and our friends, lately visited the above mine, I have much pleasure in acceding to our request that I should give you my opinion upon the present and future pro- pects, and from notes made upon the spot I hope that my remarks, such as they re, may be of value to you. The situation of this celebrated property has been of late so prominently brought before the public by able and distinguished riters, that I consider any remark from me under this head would be super- luous, and I beg to confine my observations generally to describing the extra- rdinary richness and character of the champion lode, which to the extent laid pen has no parallel for productiveness in the adjoining lead-producing counties, r even in the United Kingdom. I very much regret that through being pressed for time I only made a partial survey of the surface erections, but so far as my examination went I am satisfied everything is laid out with great skill and judgment, and reflects much credit on the management. The mine is laid open by means of a long adit cross-cut driven from the south side of the hill, which intersected the lode at about 30 fathoms from surface, and by two shafts, one of which, the engine-shaft, is sunk to the 45 fm. level; the other, a new perpen- icular shaft (called Edwards's), is in course of sinking about 100 fathoms to the west of the engine-shaft. This new shaft is calculated, I believe, to intersect the lode at or about the 60 fm. level, and when completed will be a very great quisition to the future development, as it will thoroughly ventilate the mine, nabling it to be worked on a more extended scale, with a corresponding in- rease in the returns of ore. The 15 fm. level has been extended 94 fms. west of ngine-shaft on the flookan or soft part of the lode, on the south side; at several oints a rich lode of ore is to be seen in the heading of the level, indicating that mass of ore is standing to the north. At a point about 50 fathoms west from ngine-shaft, in this level, the lode is cut through to the north wall, which is roduce from 5 to 6 tons per cubic fathom. East of shaft, at this depth, a level as been driven about 40 fathoms, and from the productive nature of the stopes in the back of this level), home to within a few fathoms of the present fore- reast, I consider the ground in this direction of a highly promising character, nd more than likely to make large returns of lead ore. A stope in the back of his level, for a length of about 23 fathoms east, and about the same distance est of engine-shaft, for 6 fms. high, and for about 30 feet wide, will average rom 2½ to 3 tons of lead ore per cubic fathom, and about 3 to 4 tons of blende or the width of the lode. The 30 fm. level, west of engine-shaft, is extended bout 44 fathoms in the flookan, and several partial trials made (but in no in- tance has the lode been cut through to the north wall), showing a rich lode of ead ore at each point, thus indicating that the ore deposits when laid open will e found quite equal in value to what I have described in the level above (the 5). The 30 east has been extended about 36 fathoms from shaft, and the part f the lode carried will average about 3½ tons of lead ore per cubic fathom. here is a stope in the back of this level 5 fathoms west and about the same istance east of the engine-shaft for 2 fathoms high, where the lode is from 5 to fathoms wide, and will produce fully 4 tons of lead ore per cubic fathom. he engine-shaft is completed to the 45, and a cross-cut is being put out north- ard to prove the width and value of the lode; the indications for continued roductiveness at this point are good. In conclusion, I beg to remark that there re even now immense reserves of ore in a lode of such exceptional width and ichness, and that those reserves will be greatly added to when the lode is further opened up by the cross-cut now driving at the 45, or deepest point; and although the past returns of ore have been large and progressive, there can be no reason- able doubt, judging from what the mine has already done, and what it is capa- ble of doing when fully supplied with the adequate machinery, that those re- turns may be doubled at no distant period. Capt. Williams deserves my thanks for the attention shown me, and for his willingness to give all the information I required for forming an independent opinion on this most magnificent pro- perty.—NICHOLAS BRAY.

SALES OF COPPER ORES.

COPPER ORES SOLD AT THE CORNWALL TICKETINGS FOR THE QUARTER ENDING MARCH, 1870:—

Mines.	Tons.	Amount.
Devon Great Consols	3957	£13,783 19 6
South Caradon	1713	11,439 2 0
West Seton	1758	8,853 2 0
Marke Valley	1460	5,690 9 0
Clifford Amalgamated	1471	5,298 10 0
West Wheal Tolgus	946	3,678 17 6
Wheal Basset	581	2,909 16 0
East Caradon	655	2,796 12 0
West Basset	589	2,734 15 6
North Treskerby	525	2,487 15 0
Brookwood	417	2,232 9 6
Phœnix	559	2,191 0 6
West Maria and Fortescue	440	1,965 9 0
Wheal Seton	696	1,893 11 0
Wheal Friendship	313	1,707 7 6
Carn Brea	336	1,688 17 0
South Crofty	586	1,597 10 6
East Pool	605	1,504 11 6
West Caradon	295	1,320 7 0
Prince of Wales	287	1,315 9 0
Gunnislake (Clitters)	228	1,218 19 0
South Frances	180	1,149 16 0
Kelly Bray	490	1,101 5 6
Wheal Crelake	360	983 10 0
Crenver and Abraham	355	967 9 0
Poldice	279	917 2 0
East Grenville	197	838 10 6
Bampfylde	71	836 0 6
Glasgow Caradon	220	811 2 0
East Rosewarne	220	784 19 0
North Downs	123	767 4 6
Gawton	213	728 9 0
Bedford United	240	717 15 0
Great North Downs	141	700 19 0
Craddock Moor	178	544 12 0
Copper Hill	127	467 14 6
Wheal Rose	150	467 14 0
Okel Tor	210	450 11 0
North Crofty	47	410 1 6
Levant	35	407 15 0
West Damsel	99	391 6 6
East Basset	118	381 16 6
East Carn Brea	115	352 12 0
Gonamena	96	343 10 6
East Seton	61	333 19 6
Wheal Crebor	80	330 0 0
Emily Henrietta	69	316 16 0
Carn Camborne	143	295 8 0
Belstone	38	222 4 0
Wheal Kitty	33	170 15 6
Dolcoath	37	135 2 0
St. Ives Consols	12	127 4 0
Wheal Russell	52	126 2 6
North Pool	24	88 16 0
Penhalls	11	80 0 6
Devon and Cornwall	40	80 0 0
North Roskear	15	70 2 6
Wheal Buller	17	68 5 6
Great Work	6	57 19 0
Buglehole's Ore	11	57 15 0
New Treleigh	39	52 7 9
Prosper United	20	47 0 0
Crane	8	40 12 0
Wheal Margery	12	33 12 0
Pendarves United	11	18 16 6

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Companies.	Tons.	Amount.
Vivian and Sons	3181	£13,868 4 4
Freeman and Co.	1455	6,837 10 3
P. Grenfell and Sons	2282	13,167 4 9
Sims, Willyams, and Co.	1610	8,889 1 0
Williams, Foster, and Co.	3601	16,415 7 5
Mason and Elkington	3310	11,660 0 5
Bankart and Sons	2410	7,470 0 9
Copper Miners' Company	2200	7,974 1 2
Charles Lambert	1016	3,424 0 0
Sweetland, Tuttie, and Co.	2097	8,345 15 0
Total	23,464	£98,051 5 0

COPPER ORES SOLD AT THE SWANSEA TICKETINGS FOR THE QUARTER ENDING MARCH, 1870:—

Mines.	BRITISH. Tons.	Amount.
Knockmahon	299	£ 1,705 2 6
Berehaven	268	1,345 15 0
Ballycummisk	101	467 9 6
Total	668	£ 3,518 7 0
COLONIAL.		
Capo	1579	£21,341 8 6
Moonta	819	5,199 1 0
Currawang	100	1,188 10 0
Yanganooka	5	75 0 0
Australian	11	58 17 0
Gwalia	10	45 5 0
Total	2524	£37,908 1 6
FOREIGN.		
Cobre	221	£ 3,145 19 0
Cuba	152	2,145 9 0
Telhadella	147	1,588 17 6
Lisbon	104	1,261 2 6
Sobral	65	866 4 0
Total	689	£ 9,007 12 0
RECAPITULATION.		
British	668	£ 3,518 7 0
Colonial	2524	37,908 1 6
Foreign	689	9,007 12 0
Sundries	168	1,675 9 6
Total	4094	£52,109 10 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Companies.	Tons.	Amount.
Copper Miners' Company	445	£ 4,499 3 10
Freeman and Co.	399	4,582 9 6
Grenfell and Son	434	6,265 11 0
Sims, Willyams, and Co.	448	6,453 3 0
Vivian and Sons	470	5,764 0 4
Williams, Foster, and Co.	676	8,992 1 4
Mason and Elkington	615	8,759 3 3
Bankart and Sons	64	390 17 9
Charles Lambert	365	2,627 0 0
Sweetland, Tuttle, and Co.	187	3,403 4 0
Total	4049	£52,109 10 0

THE ABERDOVEY LEAD MINES COMPANY (Limited).—In the March number of the "Liverpool Mining Circular" Messrs. Liscombe and Co. announced that they would shortly be in a position to place before their clients and the public full particulars of the Aberdovey Mines, with a prospectus of the company formed to undertake in an efficient manner the thorough development of the property. Having completed the arrangements necessary for the formation and registration of the company, Messrs. Liscombe and Co. have pleasure in now presenting, with the Circular for the current month, the prospectus of the Aberdovey Mines Company (Limited), accompanied by carefully prepared plans and sections, and able reports from several eminent mining authorities. The Aberdovey Mines sett, in the county of Merioneth, is situated between the seaport of Aberdovey and the town and railway station of Towyn, being about 2½ miles to the north of the former, and rather a less distance south-east of the latter. The geological position is all that can be desired, being in the very heart of the great metalliferous basin of the Principality, and in close proximity to some of the most important and profitable lead mines of the United Kingdom, having the Lisburne mines on the south, Dyliffe and Van on the east, and the celebrated lead mines of Carnarvonshire on the north; it may, therefore, be confidently stated that the position of the Aberdovey Mines, whether considered from a physical, geological, or mining point of view, is equal to, if it does not surpass, that of any mineral property in the surrounding country. The sett is very extensive, having a run at least a mile in length on the course of the lodes now being wrought, and a still greater extent in a transverse direction, where the ground is wholly unproved, though strong indications exist of the presence of numerous metallic veins, and where doubtless, on proper investigation being made, discoveries of much importance to the company may be expected. The surface arrangements on the mine have been carefully designed and well executed; the plant and machinery consist of two large water-wheels, used for pumping, drawing, crushing, and dressing; and all other buildings, and necessary appliances for preparing 200 tons of lead ore per month. A further distinguishing feature of the sett, and one which it is impossible to value too highly, is the presence of an ample and unfailing supply of water-power, which is stored and regulated in a well-constructed reservoir. Messrs. Liscombe and Co. conceive it would be a matter of great difficulty to convey in adequate terms, or within the limits of the present notice, any just idea of the value of the Aberdovey Mines. From 1855 to 1863 large returns, amounting to more than 1200 tons, were made, and considerable profits realised, though even during that period it is known that little or no energy was displayed in opening out the mine, nor all the possible advantage taken of its known resources, as is evidenced by the large amount of ore ground now standing in the bottom, and which is immediately available for the use of the present company; in fact, the general opinion in the district is that the mine will at once return sufficient to meet expenses, and at the same time make a considerable profit for the shareholders. Thorough and searching investigation having been made into all the statements concerning the Aberdovey Mines submitted to them, and having further satisfied themselves of the value of the property by careful personal inspection, Messrs. Liscombe and Co. do not hesitate to recommend the undertaking to those who desire to embark their capital in fair and legitimate mining, feeling assured that eminent scientific direction and intelligent management cannot fail to secure for the Aberdovey Mines, at no distant period, absolute success and a high place in public estimation. It only now remains for Messrs. Liscombe and Co. to state that the greater portion of the shares having already been applied for, the share list will, in their opinion, be very shortly closed by the directors; they consequently beg to advise such of their clients as may intend to become proprietors of the Aberdovey Mines to make application without further loss of time, and before the shares are quoted at a premium. Messrs. Liscombe and Co. will be happy at all times to afford further information, if required, of the Aberdovey Mines Company (Limited), on application being made at their offices, 37, South Castle-street, Liverpool.—*Liverpool Mining Circular.*

MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

BLAEN CAELAN—(*Telegram*).—The lode in the 25 east was taken down yesterday, and is of greatly increased value.

WEST JEWELL (Tin).—The operations at this mine are now being pushed on with all speed. The manager, Captain John Mayne, reports the tin pitches to be looking well, and expects to sell the same quantity of tin this two months as last.

ROCHE CONSOLS.—A further discovery is reported from this mine. A lode has been cut into nearly 4 feet wide, containing rich work for tin. This, with the other two lodes already laid open, the agent states will yield immense quantities of rich tinstuff for the stamps.

POLBREEN (St. Agnes).—This famous old sett is again about to show what it can do, both as to quantity and quality of ore. The 12 fm. level, which was, of course, the first cleared, has produced a much larger quantity of tinstuff than could have been expected, and the quality very rich. The 22 fm. level, now dry, has been cleared, and some splendid tinstones have been broken in Tregay's lode. The men are now engaged in driving under a valuable run of tin ground worked in the 12, and which there is every indication will be found very good in the 22. The pitch in the back of the 22 is doing exceedingly well. The sumpmen will make a beginning during the coming week in clearing Christian's engine-shaft below the 22.

HAREWOOD CONSOLS.—This mine has been inspected during the week by a gentleman of great experience in mining. His report is not intended for circulation, but his astonishment was expressed at the sight of such splendid rocks of gossan, and so large a lode so near the surface.

THE WEST RHOSWYDDOL CONSOLIDATED LEAD MINING COMPANY (Limited).—This mine, which is situated a few miles from the town of Machynlleth, in the county of Montgomery, is spoken of by all conversant with the locality in the most favourable terms. Peculiar interest is attached to it by reason of its immediate proximity to a number of the most valuable mining properties of the district, of which Dyliffe, Rhoswyddol, Cwmbyr, and Cae Conroy are the most noticeable; but a matter of far greater importance is the fact that nearly all the lodes traversing these setts, and from which their valuable returns of ore are procured, pass into and converge in the West Rhoswyddol Mine, and this fact of itself speaks volumes for the future of the undertaking, it being now well known, from actual observation in many parts of the surrounding country, that it is at the junction or crossing of veins the richest and most extensive metallic deposits may be expected. Nor do the natural advantages of the sett end here. The configuration of the ground is such as will admit of a thorough development of the property without the expense of machinery, for the most promising points can be reached expeditiously and at moderate cost by means of adits; and, further, there is ample and unfailing water supply for the dressing-floors and all other necessary operations. Taking all these points into consideration, we may safely say that the prospects of the West Rhoswyddol Mine are second to none in the county. The prospectus of the company was brought before the notice of the public last month, when Messrs Liscombe and Co., having expressed their own conviction of the great value of the undertaking, urged upon their friends the necessity of making early application for shares; and that the advise was not unnecessary will be learnt from the fact that at the meeting of the company, held at the offices on Tuesday, March 29, the greater portion of the shares were allotted by the directors, and the list was closed. The report then read, to the effect that the works had been proceeded with steadily, and would forthwith be prosecuted with increased vigour, was considered most satisfactory, and the meeting closed, after the usual vote of thanks, amid general expressions of congratulation on the successful formation of the company, and sanguine hopes as to its future career and prosperity. Messrs. Liscombe and Co., being anxious at all times to attend to the interests of their clients, have secured a considerable holding in the West Rhoswyddol Mining Company, and are thereby enabled still to offer a certain number of shares at par, for which they would suggest early application being made, as, in the event of any important discovery soon taking place in the mine, a decided rise in price may confidently be anticipated.

CRENVER AND WHEAL ABRAHAM.—What remarkable changes take place in mines and mining! Forty years ago tin and lead mines were held in very low estimation; but there was a greater rage for copper, which, in comparison, was at a good price, while tin and lead were very low in price. Now, on the contrary, tin and lead are high, and copper low in price. The consequence is that copper mines are not so much sought after as formerly, while tin and lead mines are in great request. Most of the deep copper mines in Cornwall yield tin, as the staple produce, at deep levels; witness Carn Brea, Tincroft, Cook's Kitchen, Stray Park, &c. Although, I doubt not, a great deal of copper ore will be found in Crenver and Wheal Abraham. I believe that the principal yield will be tin, as in the analogous mines mentioned above. I had a conversation a few days ago with Mr. Newton, of Camborne, who was the accountant at the former working, which ceased in 1825. I remember meeting him there at the accounts in 1824 and 1825, and I attended the last meeting of the company. There were present Mr. Henry Harvey (Hayle), Mr. Robert Bennett, Mr. Robt. Michell (as representative of Copper House Company), Capt. Andrew Vivian (the manager), Capt. Richards, Mr. Josiah Paull, Mr. James Paull, and a few others. The two last, Mr. Newton and myself, only survive. From the best information I can get from Mr. Newton and others, I feel increased confidence in the production of tin in these mines, a mineral undervalued and not sought after by the company, who had copper in immense quantities, and of high produce. In proof that tin is abundant in the mines, I may state that many thousands of pounds worth have been taken from the debris on the surface. The working of these mines will produce good to all concerned, adventurers, merchants, and labourers.—R. S.

ENGLISH LOCOMOTIVES IN RUSSIA.—There is a report of more than ordinary interest upon Russian railways in the first volume of the Diplomatic Reports for the present year, published yesterday morning. The writer (Mr. Rumbold), after giving some statistics of the importation of engines from England, France, and Germany, observes :—"It is admitted that the materials furnished by the English factories are of excellent quality, but complaints are made of great unpunctuality in their delivery. It would be well worth the while of English manufacturers to devote more especial attention to the Russian market, which, for this very lucrative branch of business, must for a long time to come remain dependent on foreign industry. The Russian operatives, though as a body gifted with a natural intelligence far superior to that of the majority of their European brethren, are not yet sufficiently educated or trained to habits of industry to compete with them in work requiring great nicety of execution; neither is there as yet in any of the Russian works anything approaching to the complete mechanical appliances, or the perfect system of subdivision of labour, existing in France and England, by which the multiple parts of a carriage or engine are each entrusted to specially skilled workmen, or are made in separate factories."

The Piel Hematite Iron Company

(LIMITED).

To be incorporated under the Limited Liability Act.

CAPITAL £100,000, IN 1000 SHARES OF £100 EACH

(With power to increase to £150,000 if necessary.)

A deposit of £10 per share to be paid on allotment. Subsequent calls at intervals of not less than two months, to the extent of seven-tenths of the entire capital—the remaining portion to form a reserve.

DIRECTORS.

The Chevalier HARRY CLENCH, K.G.S., K.S.I., K.G.C., &c., &c., Norwich.
Lieut.-Col. H. RIGG, Cross Rigg Hall, Penrith.
FRANCIS PARKER, Esq., Acorn Bank, Penrith.
JOHN BEATSON, Esq., Iron Merchant, Sheffield.
E. TALBOT, Esq.—MANAGING DIRECTOR.

BANKERS—THE LANCASTER BANKING COMPANY.

SOLICITORS—LAWRENCE HOLDEN, Esq., Lancaster.
Messrs. HANCOCK, SAUNDERS, AND HAWKSFORD, 36, Carey-steet, Lincoln's Inn, London.

AUDITOR—H. C. BELOE, Esq., Liverpool.

SHAREBROKERS.

Messrs. H. BAZETT JONES AND SONS, Preston.
Messrs. WOLFENDEN AND GELL, Corporation-street, Manchester.
Messrs. RIDSDALE AND WAILES, Albion-street, Leeds.
JARVIS W. BARBER, Esq., 40, Queen-street, Sheffield.

SECRETARY AND ACCOUNTANT—MARDON THOMAS, Esq.

The object in establishing this company is for the purpose of erecting furnaces and smelting the richer ores of Ireland in combination with the hematite ores of the Furness district. The annual produce of the latter cannot be less than 900,000 tons per annum, a large portion of which is sent out of the district, instead of being consumed therein, which can now be done with advantage and profit.

A site for the works has been selected in the vicinity of Piel (adjacent to the iron ore pits, and near to the large establishment of the Barrow Hematite Steel Company), which offers every facility for the successful development of the enterprise. The close proximity of the shipping port and extensive docks of Barrow, together with the harbour of Piel, will enable pig-iron to be dispatched, and the Irish ores to be received, with advantage to the concern.

Provision will be made in the Articles of Association by which mining property in the district, and other suitable localities, may be worked by the company. Leases of hematite property, embracing some hundreds of acres, in the Furness and other districts, are now under consideration, with a view to their being transferred to this company on advantageous terms.

A considerable portion of the capital has already been subscribed, and arrangements have been made with a gentleman (who will act as managing director), possessing long and valuable experience, by which every security will be afforded that the capital will be carefully and judiciously expended, and the subsequent working operations be conducted with caution and economy.

The company will be duly incorporated under the Limited Liability Act, by which every shareholder is responsible only for the amount of his shares.

It is proposed to place the capital at £100,000, in shares of £100 each; to call up (say) £70,000 (in periodical payments, as may be required), and allow the remainder to form a reserve capital.

The cost of erection of three modern-built furnaces, with all requisite appendages, purchase of land, &c., will be £50,000, thus leaving of the called-up capital £20,000 as a working fund.

The cost of making iron will be about £2 12s. 6d. per ton, and the selling price is now £3 per ton at existing works; so that upon a weekly output of (say) 1200 tons on the average (that is, after allowing for the variations of the Iron Market), from three furnaces, good profits will accrue to the proprietors, equivalent to a return, on the average, of 15 per cent. per annum.

The Furness Railway Company, whose main line passes the intended site, have kindly intimated their wish to render all possible assistance to the projected company.

The market for hematite pig-iron is now on the advance, and as it is the only class of iron employed in the Bessemer system, it is fully evident that a constant demand must exist, and continue to increase, for there can be no doubt, now that the Bessemer royalty has terminated, a great impetus will be given to this special branch of manufacture; its future requirements, therefore, will be very considerable, and as the production of hematite pig-iron must necessarily be restricted, it will be seen that a good and permanent prospect of success awaits this important section of the iron trade.

Applications for shares will also be received by the solicitors of the company, LAWRENCE HOLDEN, Esq., Lancaster; and Messrs. HANCOCK, SAUNDERS, and HAWKSFORD, 36, Carey-street, Lincoln's Inn, London, from whom prospectuses can be obtained.

FORM OF APPLICATION FOR SHARES.

To the directors of the Piel Hematite Iron Company (Limited).

GENTLEMEN,—I request that you will allot me shares in the above company, and on receipt of notice of such allotment, I will pay to the bankers of the company £10 per share as deposit; and I undertake to pay any future calls as they may become due. I further request that you will place my name on the Register of Members for the shares so allotted.

I am, Gentlemen,
Name.....
Residence.....
Occupation.....

South St. Just Tin Mining Company

(LIMITED),

CAPITAL £10,000, IN 5000 SHARES OF £2 EACH.

To be fully paid up. No further liability.

DIRECTORS.

The Hon. AUGUSTUS JOCELYN, Army and Navy Club, Pall Mall.
WILLIAM FREDERICK TRITTON, Esq., 20, Nicholas-lane, E.C. (East India Merchant).
Colonel PAGET, Farnham, Surrey.
GEORGE BURSLEM, Esq., Whitehall-yard, S.W.
WILLIAM ANGWIN, Esq., St. Just, Cornwall (Local Purser).

BANKERS—LONDON AND SOUTH-WESTERN BANK, 29, Lombard-street, E.C.

CONSULTING ENGINEER—GEORGE HENWOOD, Esq., M.E.

SECRETARY—Mr. FRAS. H. HEARN.

OFFICES,—225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

This company is established for purchasing the setts of and machinery on a mineral property situated in St. Just, Cornwall, and re-working a series of valuable tin lodes in a district long known and celebrated as one of the richest in the world, more especially for high quality tin ores.

It will only be necessary to recapitulate the names of a few of the more prominent mines in the immediate vicinity of the South St. Just Mine to establish the fact:—

	No. of shares.	Amount paid per share.	Total amount paid up.	Total dividends.
Levant	165	£10 8 1	£ 1,716 13 9	£181,665 0 0
Botallack	200	91 5 0	18,250 0 0	113,050 0 0
Wheal Owles	80	70 0 0	5,600 0 0	66,372 0 0
Spearne Moor	242	36 17 9	8,928 15 6	3,085 10 0

It will be seen from the foregoing figures that upon a capital of £34,495 9s. 3d., on the present workings alone the total dividends have been £364,152l. 10s., giving a profit of £329,657 0s. 9d., irrespective of the value of the shares.

The returns and profits from these mines are so great as to almost surpass belief, unless proved as above; their position in the Dividend List is a sufficient guarantee for the present, and the prospects of the mines as they are being opened out warrant the assumption of a long-continued course of prosperity for the future.

The setts are very extensive, and have been granted at the unusually low royalty or dues of 1-24th for the term of 21 years, on the mining conditions generally adopted in Cornwall.

Their geological position cannot be surpassed, being in beautiful congenial strata for tin and copper ores, precisely the same as in the above-quoted mines—in the granite near the junction with the killas.

Ten rich tin lodes, as well as cross-courses (known in the locality as guides), pass through this mineralised piece of ground, and have proved productive where wrought on; the deepest exploration is 20 fathoms below adit, a sea-level driven in from the face of the cliff, but not yet sufficiently extended to unwater the principal lodes. Many of these have been sunk on as far as water would permit the prosecution, and large quantities of tin ore raised and sold therefrom, proving that immense reserves of valuable tin ore exist below, which may be worked at extraordinary profits.

It is the decided opinion of all competent judges that when this mine shall have been re-set to work with spirit, economy, and proper supervision it will soon become a standard dividend property.

The reason operations on the mine were discontinued was simply the utter impossibility of raising sufficient capital to carry on the works during the late panic, although it was yielding ore sufficient to pay a considerable portion of its monthly cost, despite the then unprecedentedly depressed price of black tin, £30 per ton lower than at present. It seems now, however, a fact proven that the price will never again be subject to such vicissitudes, as foreign produce cannot be imported under present fair rates.

On the mine are all kinds of efficient machinery, a catalogue of which is appended. It will, therefore, be at once seen that tin ore may be sent into the market forthwith, and that in a brief period the mine will be rendered remunerative.

An agreement, dated the 26th day of March, 1870, has been entered into for the purchase of the vendors' rights, together with the costly machinery intact, for the sum of £5000—£2500 to be paid in cash, and £2500 by the issue of 1250 shares in the capital of the company. The directors feel assured by entering into this arrangement they save years of time,* and thousands of pounds sterling in outlay. These advantages render the South St. Just Tin Mining Company one of the most genuine and favourable opportunities for investment ever brought under the notice of the public, and it is computed that £5000 will be all the capital necessary to render this property a first-class permanent tin mine.

Prospectuses, with forms of application for shares, may be obtained at the bankers or offices of the company.

* It is an axiom in mining, that "Time is money."

SCHEDULE OF MACHINERY AND MATERIALS ON SOUTH ST. JUST MINE.

One water wheel (iron), 24 ft. diameter 3 ft. breast, with cast iron stamps; axle for 8 heads, lifters, cams, &c., complete; 1 water wheel (wood), 24 ft. diameter 3 ft. breast, with cast iron stamps; axle for 8 heads, lifters, cams, &c., complete; 1 water wheel (wood), 8 ft. diameter 2 ft. breast, on tin floors; 1 round buddle (Borlase's patent); wood sheds; 4 tin dressing frames, kieves, barrows, tin dressing tools in great variety; strips and launders, &c., &c.: 30 fms. 3 ft. launders; 30 fms. 6 in. ditto; 37 fms. 1¼ in. round iron rods, with pulleys and stands; balance bob; 15 fms. bucket rods; 15 fms. 5½ in. pumps; working barrel; clack door piece; windbore, &c., complete; 50 fms. tram roads; tram wagon; 40 fms. skip roads: 4 skips; 2 horse whims and shaft tackles; 60 fms. whim rope; 20 fms. winze rope; 60 fms. ladders.—Wood Carpenters' Shop: Bench, chest, new and old timber; 2 barrows; 2 winze trees; 3 winze kibbies.—Smiths' Shop: 36 in. bellows, anvil, grindstone; smiths' and miners' tools; new and old iron and steel; miners' chests, &c.; 5 dozen shovel and pick hilts; 12 steel pointed shovels; cast steel hammers; hatchets; hand saws; with a good well furnished counting house, powder house, and sundry other mining requisites.

REPORTS.

St. Just, May 18, 1868.—At your request I herewith beg to hand you my report of the South St. Just Mine, which is situated in the parish of St. Just, about eight miles west of the town of Penzance, and in one of the best tin districts in the county of Cornwall. The sett is extensive and contains ten east and west lodes, with a large cross-course, or as it is called a guide in this parish, which runs about north and south, and intersects all the other lodes. The late company only worked on the guide, and three of the east and west lodes; they extended the shallow adit 30 fathoms on the guide in a lode from 8 to 18 feet wide, mixed with tin just sufficient to pay for returning. The deep adit level, 18 fms. below the surface, is extended 40 fathoms on this lode, which is here improved for tin. There was a winze below the deep adit sunk 10 fathoms, and a level extended 12 fathoms south in a good tin lode 8 feet wide; below this level there is a winze sunk about 6 fathoms, which produced £59 worth of tin in the sinking, lode now holding down good. The appearance of this lode induced the cutting down and making good a shaft from the surface to the 10 fathom level below the adit, which was done at a cost of from £80 to £100. The sinking of this shaft was then continued to 11 fathoms below the 10 fathom level, at a cost of about £120. This shaft is 6 fathoms north of the winze, in which there is a good tin lode. At the 10 fm. level in the west end of the shaft we have another of the east and west lodes, which we cut in extending the adit level; this lode has produced a good quantity of rich tinstuff, some stones now at the counting-house being as rich as the county will produce. From the present bottom of the shaft you can get under the points spoken of on both these lodes, in a very short time, when I have no doubt you will open up splendid tin ground. The deep adit level has been brought up from the cliff 60 fathoms, towards the "Ding Dong" lode, which in former times produced from shallow workings large quantities of tin; this end is now about 20 fathoms from this run of tin ground. I may say that I have been a mine agent 49 years, and I never saw a mine more favourably situated for a company commencing operations; in three months I believe fair returns of tin will be made. The mine is well found in machinery, and being of water power, can be worked at an easy cost.

J. CARTHEW, Late Manager.

St. Just, May 22, 1868.—I consider the present position of the South St. Just Mine most promising for future operations. I was agent there for some years, and from the appearance of the lodes I have no doubt but that a small additional outlay will open up a valuable mine. There are several east and west lodes, only three of which did we work. There is also a large guide, running about north and south, intersecting all the other lodes. A shaft on this lode we put down from the surface about 39 fms., being 21 fms. below the deep adit level. We extended at the adit level on one of the east and west lodes from the guide shaft 10 fms. east in good tin ground; we had this lode in the 10 fm. level very productive, and have it now holding down in a winze below this level. If this winze were brought down 5 fms., and communication made from the bottom of the shaft, I believe a good run of paying ground would be opened up. It can be stoped for about £3 per fm., and is worth on an average £9 per fm. At the 10 fm. level, west of the shaft, we cut into another lode, from which we broke some exceedingly rich tinstuff. At the adit level this lode is 18 in. wide, and the last tinstuff sampled was worth 4s. (now worth nearly double) per sack of 14 gallons. I consider that by extending from the bottom of the shaft east to get under the winze, and west to intersect the new lode, you will lay open a great quantity of tin ground which will pay well to develope. The Ding Dong adit level is within a few fathoms of where (report says) large quantities of rich tinstuff were raised at shallow workings. I think that in from three to four months you would obtain important results.

WILLIAM WILLIAMS, Late Agent.

Quantity of tin sold to 25th May, 1866, 16 tons 8 cts. 1 lb., realising £979 0s. 6d.
Lords dues, 1-24th for tin; 1-20th for copper.
The cost to continue operations would be only from £70 to £80 per month.

March, 1870.—In reply to your favour I beg to say that I was greatly surprised on my return from India to learn that the South St. Just Mine was not at work. On enquiry, I find that the terrible panic, and, consequently, the low price of tin, had been the causes, as I felt assured the poverty of the mine could not be the reason. On looking over my papers I find the report of my examination of the ground in 1862. If it be of any service to you pray use it; I cannot either add to or diminish the opinions therein expressed, GEORGE HENWOOD.

Report of the South St. Just Consols Mines, in the parish of St. Just, Cornwall, by GEORGE HENWOOD, Esq., M.E.

November, 1862.—These mines are situated on the southern part of this highly-favoured mining district. In this parish are some of the richest of the Cornish tin mines. Without exception it may be pronounced the richest mineral depository for its extent to be found in Cornwall. The following mines being all within the same vicinity, and almost adjoining each other:—Boscaswell Downs on the north, with Pendeen Consols, Levant, Botallack, Spearne Moor, Spearne Consols, Carnyorth, Wheal Owles, Boscean, and Balleswidden, all of which have paid enormous dividends, and have proved deep and lasting mines. More recently the St. Just United Mines, in close proximity to South St. Just sett, have been re-worked with most signal success, the present price of tin being highly remunerative, and the tin of St. Just being generally of the best quality. The strata are granites and porphyries, in close neighbourhood of the killas or clay-slate, therefore admirably situated for metallic veins, especially tin lodes, several of which are known to exist, and are to be readily traced in the cliffs. The South St. Just Mines have the advantage of proof positive that tin ore in large quantities is easily and cheaply procurable, skilled mining labour abundant, a ready market close at hand, and, above all, at very moderate dues—1-24th, with a lease for 21 years; and wish you the success no doubt you will early achieve.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—John Roberts, April 14: Since my last report the end from the bottom of the winze towards the No. 2 adit end has considerably improved. If it continues to open out as it has this week we shall have a splendid lode. The No. 2 adit end is looking very promising for making a fine lode, but we have 3 fms. more to drive south in order to reach the leader of lead we have in the winze. I have put two men to open on the back of the lode on the top of the hill, where by a little way in sinking we shall meet with the junction of the south branches with the lode, and where I expect good results. The deep adit level, on the eastern side, is just the same as when I last reported. We have completed the main water-course, and I am hoping that we shall have a good supply of water for the whole of the season.

ASSHETON.—W. T. Harris, April 11: The new engine-shaft is being sunk by a full pare of men. The ground is favourable for progress. The deep adit level, driving south on the course of the lode, contains saving work for lead, and is very promising for an improvement. We have commenced a cross-cut through the lode 30 yards south from the forebreast, which I shall report to you as it proceeds; I have no doubt we shall find it very productive. The lode in the 61m level, driving north, is composed of spar and occasional stones of lead; fair progress is being made. Our surface operations are pushed forward with all speed. We shall at once begin to dress another parcel of lead. I may further state I have again examined the mine most carefully, and which only strengthens my belief that when the mine is properly laid open it will prove second to none in the Principality.

BALLACORKISH.—Capt. Grose, April 9: Since my last report, I am pleased to inform you, the lode in the adit forebreast has greatly improved; it is fully 3 ft. wide, composed of beautiful honeycombed spar and gossan, strongly mixed with carbonate of lead, and letting out a heavy flow of water. The lode in the new pitch behind the adit forebreast is at present small, and is worth about 5 cwts. of lead per fathom. I expect this part to improve for ore in the course of a few days. The lode in No. 1 pitch is worth 20 cwts. of lead and 25 cwts. of blende per fm., and the lode in No. 3 pitch is worth about 6 cwts. of lead and 6 cwts. of blende per fathom. The ground in the 12 is much the same character as last reported—if anything, it is a little more stiff. I cannot see any change whatever at the engine-shaft. The men are making good progress with the sinking.—King's Mine: Up to this date the water is down in the shaft 12 fms. from surface. It is slow work now, having all the water from the levels to contend with; within the last two days the decrease has only been 14 in. in the 24 hours. The two boilers are now on their beds, and the masons are building the flues.

BEDFORD UNITED.—Jas. Phillips, April 13: No change to notice has taken place in any part of the mine since last report. The mine will be fully reported on next week.

BUDNICK CONSOLS.—R. Hill, J. Rawlings, April 13: We are progressing very favourably with the open cutting at the western part of the mine; we have got to the mouth of the old shallow adit, which we find to be very much crushed, but hope to have it cleared in three or four weeks, so as to enable us to set to work on the elvan course. The lode in the 23, west of Whitford's, is producing saving work. The lode in the 28 is poor; we have put a pare of men at the deep adit level, north of the old engine-shaft, to drive and cut the north elvan. We have erected a whim over Miners' and old engine-shaft, so as to enable us to haul the tinstuff therefrom. Other operations are going on satisfactorily.

BWARDRAIN CONSOLS.—R. Northy, April 12: The engine-shaft is cased, divided, and completed for drawing to the 55, and the men are driving to cut the lode, which will be done in a few days; they will then at once start to drive under the main run of ore ground gone down in the bottom of the 45. All the other bargains are going on as usual. The new drawing-machine is working very well. We are going on regularly with the dressing towards another sampling, which will be done with all dispatch.

BWLCH CONSOLS.—R. Northey, April 13: The lode in the 70 is looking better, and will improve as we progress towards the good ore ground opening out in the 60. The lode in the 60 has greatly improved, now worth 3¼ tons per fm. I see no alteration to notice in any other part, except in the cross-cut driving north to cut the north or old Bwich lode, where we are cutting several branches, composed of quartz, lead, and copper, and in the true lead-bearing stratum of this district. We shall sample on Saturday next 50 tons of the usual quality silver-lead ore.

CAE GYNON.—April 13: North Lode: In the 50 fm. level we are still driving on the south part of the lode, being more easy for progress, and have not commenced taking down the remaining or north part; this end is letting out water freely, which is a good indication. I have just taken on some fresh miners, and have put them to sink No. 1 winze, below the 40, and will report value of the lode next week. No. 2 winze, below the 40, is going down in a nice lode, worth about 2 tons of ore per fathom, and likely to continue. I have also put some new men to stope in the back of the 40 fm. level, between Nos. 1 and 2 winzes; the lode at present is worth about 10 cwts. of lead ore per fathom, and as we continue the stope upwards the lode increases in value. The stope below the 30 is worth about 1 ton of lead ore per fathom.—South Lode: In the 50 fm. level west we are driving by the side of the lode, and shall not take it down until the end of the month, as it can be done much cheaper when we have opened on it for a few fathoms in length. We are getting on with the dressing as fast as we can, and have just enough hands employed to keep away the stuff as it comes up from underground.

CAPE CORNWALL.—R. Pryor, J. Davey, April 12: The ground in the 100 cross-cut, driving north of engine-shaft, is improving, and is becoming more favourable for progress. In the 70 cross-cut, driving south of ditto, the ground continues just the same as last reported.

CARADON CONSOLS.—S. Bennetts, April 12: The sinking of the south shaft below the 90 progresses satisfactorily. Clymo's lode in both the 90 fm. level ends seems to be again improving; in each end it is about 1½ ft. wide, and saving work. There is not much change to notice on No. 2 lode, except in the winze below the 78, where it is not quite so wide as it has been.

CARDIGAN BAY CONSOLS.—Chas. Williams, April 13: Pensarn: The machinery is complete, and of the best construction; this part of the mine will be in fork on Tuesday next, and we shall afterwards resume sinking. The lode in the eastern adit is improving; the part we are carrying is 4 ft. wide, consisting of spar, blende, slate, and silver-lead ore, yielding of the latter profitable work for the crusher.—North Adit: The water-blast and air-pipes are completed and fixed, which force abundance of air to the end, and the men are below the 78, where it is not quite so wide as it has been.

CARRON CONSOLS.—Chas. Williams, April 13: Pensarn: The machinery is complete, and of the best construction; this part of the mine will be in fork on Tuesday next, and we shall afterwards resume sinking. The lode in the eastern adit is improving; the part we are carrying is 4 ft. wide, consisting of spar, blende, slate, and silver-lead ore, yielding of the latter profitable work for the crusher.—North Adit: The water-blast and air-pipes are completed and fixed, which force abundance of air to the end, and the men are below the 78, where it is not quite so wide as it has been.

CEFN BRWYNO.—James Paull, April 12: The 92 east is suspended for a while, and we have commenced to drive the same level west, where I am glad to say the lode is improved, and worth 15 cwts. of lead ore per fathom. We may expect to open out some good ore ground here from what is seen in the level above. The lode in the stopes over this level, east of shaft, will yield on an average 18 cwts. of lead ore per fathom. In the 80 going west the lode is 4 ft. wide, worth from 1 ton to 1¼ ton of lead ore per fathom. The lode in the two stopes over this level, west of winze, is large, and will yield 15 cwts. of lead ore per fathom. At the 56, going east, the lode is 3 ft. wide, composed of spar, carbonate of lime, blende, and a light clay-slate, with spots of lead ore. The lode in the 20 east looks much the same, containing a little lead and blende ores, and is of a promising character. All surface work is going on regular, and we sampled 30 tons of lead ore on Wednesday last.

CHIVERTON.—G. E. Tremayne, J. Borlase, April 14: The lode in the engine-shaft has improved, now 3 ft. wide, composed of soft spar, flookan, and mundic. The lode in the 40 fm. level, driving south, is 18 in. wide, composed of spar, and flookan, with occasional stones of lead. In the 30, on the east and west lode, lode composed of flookan, white iron, and mundic, with a promising appearance. In the 30 west, on east and west lode, the lode is 15 inches wide, producing blende, copper, and lead, with a good appearance for an early improvement. The stope in the back of the 20 fm. level, on this lode, is producing 4 cwts. of lead per fathom.

CHIVERTON MOOR.—G. Tremayne, W. Bennett, April 12: Harris's engine-shaft men have completed the casing and dividing down the shaft from the 95 to the 105, and commenced driving the cross-cut south at this level towards the lode, the ground in which is favourable for driving. The lode in the 95 west is 2 feet wide, composed of friable quartz, mundic, and lead; from present favourable appearances we soon expect an important change. The lode in the 85 west is 4½ feet wide, composed of quartz, flookan, mundic, and lead, of the latter will produce 30 cwts. per fathom; two stopes in the back of this level are each worth 20 cwts. of lead per fathom. The lode in the 75, west on the north part of the lode, is 2 feet wide, producing a little lead. Two stopes in the back of the 75 west, on the south part of the lode, No. 1 is worth 30 cwts. of lead per fathom, and No. 2 is worth 15 cwts. of lead per fathom. Nothing new in the cross-cut north of Ward's shaft; we are making good progress in sinking the new shaft, east of Harris's engine-shaft. We shall sample on Monday next 75 tons of rich silver-lead ore.

CHIVERTON VALLEY.—J. Juleff, James Trevillion, April 13: Tregoning's engine-shaft is down 30 fms. from surface; the caunter lode is cut into 6½ ft., being composed of quartz, mundic, white iron, and stones of lead, with a most promising appearance; the stratum is very congenial for mineral, and the men are making good progress in sinking. The 65 end, west of Retallack's shaft, is in a lode 2½ ft. wide, principally flookan. The 85 cross-cut is driven south of Retallack's shaft 4 fms.; we are glad to say the ground has very much improved for progress, and we now hope to reach the lode quickly; and, judging from the character of the lode in the level above, we have great confidence in meeting with a productive lode at this point. The stope in back of the 75 fm. level continues to look well. We are in course of laying down the dressing-floors, and have commenced to put ore to pile. The engineers have begun to fix the new engine, which we will push on with all speed.

CWM ERFIN.—April 12: We are pleased to say that there is a little improvement in our western ground. In opening out the south side of the level, about 25 fms. west of the engine-shaft, we find the lode to be full 7 ft. wide, carrying a good leader of silver-lead ore on the south wall, with several strong branches disseminated throughout. The present value of the lode is 1½ ton of silver-lead ore per fathom. The lode in the rise over this level against Taylor's shaft, is 6 ft. wide, yielding dressing work of a low quality, the ground hard and slow for progress, two stopes 12 back and bottom of this level producing 12 to 15 cwts. of lead ore per fm. The lode in the 45, east of the drawing shaft, is 2 ft. wide, containing killas and strong branches of spar, sprotted with blende. The lode in the 32, going west from the engine-shaft, is 2 ft. wide, and worth ¼ ton of lead ore per fathom. The stope in the bottom of the 20 has rather improved, lode worth 15 cwts. of lead ore per fathom. Taylor's shaft is in good course of sinking below the 20, and the lode is gradually improving as we sink, containing at this time some good spots of lead ore. The lode in Taylor's drift is 2 ft. wide, composed of killas, quartz, and spots of mundic. The lode in the rise over the back of this level is 18 in. wide, composed of killas, carbonate of lime, detached cubes of blende, and lead ore, looking better than it was. The lode in the stope in back of this level is 4 ft. wide, and worth 1½ ton of lead ore per fathom. We are making good progress towards our next sampling.

DEVON AND CORNWALL UNITED.—E. James, April 13: The lode in the 46, west of whim shaft, is 2 feet wide, of a promising description, composed of copel, quartz, mundic, and copper ore; there is a great increase of water from his end, which is a favourable indication for an early improvement, and is

being pushed on with all possible speed to get back under the ore ground gone down in the level above, which is now within a short distance. There is no important change in the 22, west of engine-shaft, the lode is at present small, but has a kindly appearance. The tribute department is without change, the men are earning good wages at 10s. in 1l.; we have about 120l. worth of ore for next sale, and hope to get about the same quantity for sale by the end of May, on the whole the prospects are more cheering.

DOLCOATH.—J. Thomas, W. Provis, J. Tonkin, J. Bawden, April 11: The lode in the 302, east of engine-shaft, is producing a little tin. The 290, east of new cast, is worth 140l. per fathom; the new cast shaft has been holed to this level since the last account, and the ground set to stope. The 29 s, west of the engine-shaft, is producing a little tin. The old sump-shaft, sinking under the 278, is of no value; we expect to hole this shaft to the 290 in about two months. The 278, west of old sump, is at present disordered by a cross-course; the lode was previously worth 70l. per fathom. The 278, east of new cast, is worth 10l. per fathom. The 266, west of old sump, is worth 15l. per fathom. The 266, east of new cast, is producing a little tin. The 254, west of old sump, is worth 15l. per fathom. The 254, east of new cast, is producing a little tin. The 242, west of old sump, is worth 20l. per fathom. The 242, east of new east, is worth 15l. per fathom. The 230, east of new east, is producing a little tin. The winze under the 220, west of Harriett's, on the north lode, is holed to the 230. We have again commenced to drive the 220 west on this lode, which is worth 12l. per fathom. Harriett's shaft is sunk to the 248, and we have just commenced to drive west at this level. The 236, west of Harriett's, is producing a little tin; we think there is more lode further south. Wheal Bryant shaft, sinking under the 224, is producing a little tin. The 224, west of Harriett's, is worth 10l. per fathom. The 212, west of Harriett's, is worth 20l. per fathom. The 210, east of Valley, is worth 10l. per fathom. The 215, east of Stray Park, is worth 10l. per fathom. There is no change on the North Entral lode, nor in the adit on the south lode since the last account. We have commenced to drive a cross-cut north at the 254, west of old sump, to intersect the South Entral lode, which produced a considerable amount of copper in the upper levels, but which has not been seen below the 143; we expect to have about 60 fathoms to drive to intersect it.

EAST CARN BREA.—John Rodda, April 13: The lode in Thomas's engine-shaft is from 3 to 4 ft. wide, and still worth 20l. per fm. for tin, and producing some good stones of copper ore. The lode in the 100 cast is 4 ft. wide, and worth 7l. per fm. for tin. In this level west the lode is producing saving work for copper and tin ores, worth about 4l. per fm.—No. 6 lode: We are making the necessary preparations for sinking Buck'ey's shaft, which will be completed by to-morrow, when we shall commence to sink. The lode in the 80, west of Buckley's, is 2 ft. wide, and will yield 3 tons of copper ore per fm. In this level east, and east of the cross-course, the looe is looking very promising, and yielding 2 tons of copper ore per fm. The ground in the 60 cross-cut, north of the old engine-shaft, is easier, and the price for driving is reduced from 18l. to 10l. 10s. per fathom.

EAST DARREN.—April 12: Taylor's Shaft: In the 116 east the lode is 4 ft. wide, showing strings of lead ore, but not enough to value, but promising an improvement. In the 104 east no lode has been taken down since last reported, the end being full of stuff, and men put to stope over this level, 10 fms. behind the end, in a lode from 5 to 6 feet wide, worth 13¼ ton of ore per fathom, but shall resume the driving of this level as soon as the stuff is cleared. In the 92 east the lode is 5 feet wide, producing small spots of ore occasionally. In the two pitches over this level the lode is yielding 1½ ton of lead ore per fathom. The lode in the 68 east is 1 yard wide, much broken up and disordered by beds and soft joints; at this point we hope to communicate to the cross-cut south of Skinner's shaft shortly. In the cross-cut north of new shaft, at Blaenewm, the ground is still favourable for driving. In the two eastern cross-cuts north there is no change worthy of remark. The tribute pitches throughout the mine continue to yield their usual quantities of ore.

EAST NEW LOVELL.—C. Bawden, April 14: The shaftmen at the engine-shaft are engaged in cutting plat, preparatory to driving south to cut the different lodes known to be in that direction; the ground is improved, and is in character everything that can be desired; from the quantity of water issuing from the south, I am of opinion that one of the lodes is close at hand.—Moor Shaft: The men have driven 6 feet south towards the East Lovell lode, and from the quantity of water coming from the end, we believe we are very near the lode. We have cut several small branches or droppers, all of which contain tin; this may be looked on as a very favourable indication.

EAST WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, April 9: The only alteration we have to report in this mine is that the lode in the 55 is now worth nearly 6 tons of ore per fathom; it is a splendid-looking lode, and we feel confident there is something greater ahead of us.

— G. R. Odgers, W. Bennetts, April 13: We have no change to report in either of the cross-cuts, because we have been compelled to take the men to assist about the ore for the sampling. We have resumed the 75 east by six men, to prove the lode under the bunch of ore in the 55; the lode is 1 foot wide, with good stones of copper ore—looking very promising. There is an excellent lode in the end in the 55, nearly 4 ft. wide, and worth from 5 to 6 tons of good yellow ore per fathom. The eastern stope (55) will produce 4 tons per fathom, and the western ones 2 tons respectively. The lode in the 45 east will produce 1½ ton of copper ore per fathom.

EAST WHEAL LOVELL.—Richard Quentrall, April 13: Since the meeting the end driving west towards the winze below the 70 has improved. There is a splendid course of tin both in the end and winze, between which we hope to effect a communication in a day or two. No alteration in any other part.

EAST WHEAL SETON.—Joseph Vivian and Son, April 14: There is no alteration in any part of the mine since the last report. The water is falling off at Cartwright's shaft, so that we are enabled to resume the copper stopes below the 27, and in a day or two trust to be driving the 34, and making fresh discoveries.

EXCELSIOR.—G. Rickard, April 13: We are making excellent progress with the driving of the deep adit level south towards the great tin and copper lodes. The ground still remains of a most favourable nature both for progress and mineral. The general meeting will take place next week, when a full and detailed report will be presented to you.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., April 9: We are pushing on the drivage of the 95 fm. level cross-cut, north from King's engine-shaft, through the south part of the lode, where it is, so far as seen, chiefly composed of capel, quartz, mundic, and good spots of copper ore. The part of the lode being carried in the 82 east is 6 ft. wide, principally composed of quartz, mundic, and yielding to the amount of 5 tons of good quality copper ore per fathom. In Milford's stope, in the back of the 82 west, the lode is 5 ft. wide, principally composed of capel and mundic, worth 4 tons per fathom. The lode in the 70, east of cross-cut, is showing a very kindly appearance, being over 5 ft. wide, and yielding full 5 tons of ore per fathom. The lode in Nicholl's stope, east of Ferrell's winze, is looking exceedingly well, being worth 7 tons of copper ore per fathom. Simon's stope, east and west of Cradick's winze, in the bottom of the 70, is yielding from 4 to 5 tons of copper ore per fathom.

GREAT ROCK.—J. Kemp, April 13: I am sorry to say that we had a breakage in the shaft, by some means or other the shaftmen broke the door-piece; however, we have removed it, and are now in fair sinking again: the lode is looking very promising indeed, the ground is becoming wetter, and a branch of lead forming on the hanging side, containing more carbonate of lime than I have before seen—a very promising looking lode, now down 17 ft. under the 12. In the 12, east of shaft, we have got through the hard bar of ground we were in, and I think we are getting into the ore ground seen above, as we have broken some good stones of lead here to-day, and hope to be able in a few days to report that we are in the bunch. The stope in the winze in the bottom of the deep adit level, east of shaft, is poor, although the lode is 12 ft. wide, and very strong, composed of clay-slate, carbonate of lime, blende, and lead ore, spotted with the latter for the whole distance, 12 ft. I may here state that blende has not been seen mixed with our lead before, and I must say I like it very much, as it indicates, in my opinion, that we are getting into stronger mineralised ground. The 12, west of shaft, is without alteration, composed of clay-slate, intermixed with carbonate of lime and small spots of lead. The stopes in the back of the deep adit, west of deep cross-cut, are hard, producing about 8 cwts. of lead per fathom. The lead in this stope, which used to be chiefly on the footwall, has gradually inclined to the hanging side, so that it is not 12 ft. from the footwall, and seeing it incline so much this way I am in hopes it will lead us into a good branch on the hanging side. Dressing is going on, and all the machinery is in good order.

GREAT SOUTH CHIVERTON.—John Nancarrow, April 11: The ground in Gifford's engine-shaft is rather harder for sinking, but we are making good progress. The lode in the 40 east is 3 ft. wide, contains a great deal of flookan and prian, and altogether looks very promising. There is not much alteration in the 50 west, except that the timber has given way, and will take three or four days to replace it. The stope at the 20 looks very well.

GREAT SOUTH TOLGUS.—John Rodda, April 13: The water is drained to the 166, when operations will be resumed forthwith. We have discontinued the working of Wheal Tehidy engine, and are keeping the water in fork by working Lyle's engine about 6¼ strokes per minute. The lode in the 154, west of Lyle's engine-shaft, is looking kindly, and worth 4l. per fathom for tin. In the 140 west the lode is large, and producing saving work. The part of the lode being carried in this level west of No. 2 cross-cut is producing a little tin. The ground in the 125 cross-cut, north from Noel's shaft, is easier for driving, and the cross-cut going south at the 125, west of Lyle's, is progressing satisfactorily.

GREAT WESTERN.—Edward Rogers, Edmund Rogers, April 13: Fisher's Lode: Michell's engine-shaft is sunk 7 fms. 3 ft. below the 20. In the winze sinking in bottom of the 10 the lode is 18 in. wide, worth 3l. per fathom, and passing through profitable ground.—Middle Lode: In the 30 we are cross-cutting south of Curtis's shaft by six men, at 5l. 10s. per fm., and making good progress. In this level, driving west of said shaft, the lode is 2 ft. wide, worth 8l. per fm. The rise in back of this level, east of the shaft, is communicated to the winze sunk from the level above, and the back set on tribute at 5s. in 1l. In the 20 end, east of this shaft, the lode is 6 in. wide, producing occasional stones of tin. In the winze sinking in bottom of this level, west of the shaft, the lode is 18 in. wide, worth 5l. per fm.—South Lode: Willis', whim-shaft is down 2 fms. 3 ft. below the deep adit, the lode in which is 2 ft. wide, and worth 4l. per fathom. At the deep adit, driving west of the shaft, the lode is 1 ft. wide, worth 6l. per fathom. In the rise in back of the adit the lode is 9 inches wide, worth 3l. 10s. per fathom.

GREAT WHEAL LOVELL.—Chas. Bawden, April 14: The lode in the adit level, driving east on Trumpet Consols lode, is 3 ft. wide, and tinny throughout, a very fine lode. The engine-shaft is in course of sinking, and is now down 10 fms., in ground very congenial for the production of tin. The pitch in the back of the adit level is turning out very well, and the men getting good wages. The foundation for the engine is being taken out, and I hope to meet with a good second-hand 60-in. cylinder engine in the course of next week.

HAREWOOD CONSOLS.—April 13: We are making good progress in sinking the engine-shaft, and breaking some fine stones of gossan.

HINGSTON DOWN CONSOLS.—J. Richards, April 13: In the sump-winze sinking below the 140 west the part of the lode carried, 5 ft. wide, is composed of capel, quartz, peach, mundic, and copper ore, worth 2 tons, or 8l. per fathom, and tin ore worth 15l. per fathom; together, 23l. per fathom, and is very healthy. In the 140 east the lode is 5 ft. wide, and worth 1 ton of ore, or 4l. per fathom. The lode in the stope in the back of the 130 east is worth 1½ ton of ore, or 6l. per fathom. In the 110 west the ground continues about the same, and fair progress is being made. In the 100 west the drivage is being continued in a northerly direction, and good stones of tin ore are being obtained. In the deep adit level south fair progress is being made.

MAES-Y-SAFN.—April 11: In the 370, east of Grosvenor's shaft, the lode is soft for driving, and looks kindly. In the 350 west there is no change to notice. The 310 east is showing a few spots of lead, but not to value. The 310 west is poor, and the ground getting harder for driving. The 370, east of the sump-winze, is producing ½ ton per fathom. The 370 west is unproductive. The 290, east of No. 3 shaft, is producing ½ ton per fathom. The winze under the 310, west of Grosvenor's, is producing 2 tons per fathom. The stopes in the bottom of the 310 west are producing 2 tons per fathom. The stope in the back of the 310 east is much the same as when last reported. There is no change to notice in any of the stopes or tribute pitches throughout the mine. The mine is in fork, and everything going on regularly.

NEW WHEAL LOVELL.—Charles Bawden, J. Prisk, April 14: Hill's engine-shaft is in course of sinking below the 60 fm. level, and is down 3½ fms.; the ground has very much improved, and the lode become better defined. The 50 is now within 2 fms. of the great cross-course; the lode in the end is 3 ft. wide, producing very good stones of tin. The lode in the 40, east of the great cross-course, is split in two parts; the men are now engaged cutting south, and the part seen is about 2 ft. wide, worth 20l. per fathom. The winze sinking below this level is down 3 fms.; the lode is 4 ft. wide, worth 30l. per fm.; a fine lode. The lode in the stope in back of this level is worth 25l. per fm. The lode in the 30 end is 2 ft. wide, worth 15l. per fm. The tribute pitches throughout the mine are turning out fair quantities of tin, and the men earning fair wages in their respective tributes.

MINERA UNION.—Wm. T. Harris, April 13: Brabner's Shaft: The lode in the winze in the bottom of the 80 yard level south has much improved, now worth 3 tons of lead per fathom, and very promising for a further improvement.—Boundry Shaft: The pitch in the back of the 40 yard level south is worth 1½ ton of lead per fathom.—Flue Shaft: The lode in the 50 yard level north yields good stones of lead, and is easy for progress. No alteration in any other portion of the mine. We have weighed off the 11 tons of lead and 4 tons 6 cwts. of blende, the produce of last month, and are now busy dressing another parcel for this month.

NORTH CROFTY.—Joseph Vivian and Son, William Thomas, jun., April 14: The lode in the engine-shaft, sinking under the 208, maintains a promising appearance. In the 208, west of Petherick's shaft, the lode is 3ft. wide, and worth 10l. per fathom. The eastern stope, in the back of this level, is worth 28l. per fathom; and the western stope 20l. per fathom. We have set a winze to sink under the 196 fm. level, 12 fms. in advance of the present 208 fm. level end, in a lode worth 20l. per fathom. In the 196 fm. level end west the lode is worth 20l. per fathom. In the winze sinking under the 150 west, on the south part of Reeves's lode, the lode is worth 15l. per fathom. We are making good progress in drawing our tinstuff with the wire-rope, which answers our expectations.

NORTH POOL.—J. Vivian and Sons, April 11: Further improvement in the 40 east, on Ballarat lode, now producing fully 4 tons of good copper ore per fm.

PEDN-AN-DREA UNITED.—W. Tregay, J. Thomas, April 9: Sump: We are making fair progress in sinking below the 140, the ground being favourable. In the 120 north the ground is favourable for driving, and good progress is being made. In the rise in the 100 east the ground is favourable, the lode producing stones of tin.—Cobbler's: In the rise in the 120 west the ground is still hard for rising, the lode producing stones of tin. The north lode, in the 90 west, the lode is still unproductive. In the 80 east the lode is worth 20l. per fathom. In the 80 west the lode is worth 10l. per fathom. In the 60 east the lode is worth 30l. per fathom. In the 60 west the lode is worth 30l. per fathom. In the 55 east the lode is worth 15l. per fathom. In the 55 west the lode is worth 25l. per fathom. In the 47 east the lode is worth 10l. per fathom. In the 47 west the lode is worth 10l. per fathom. The stopes and pitches throughout the mines continue their usual rate of production, and bid fair for improvement.

PENHALLS.—S. Bennetts, W. Higgins, April 9: The stope in the bottom of the 60 is worth 15l. per fathom. The 60 west end, 8l. per fathom. The rise above the 50 east contains a large lode, worth 10l. to 12l. per fathom. The stope in the back of the 50, east of west cross-course, on the north lode, is worth 20l. per fathom. The stopes in the back of the 45, on the new lode, are not so productive as they approach the gossan, being worth at present 7l. per fathom. At the Pink Mine, the 50, west of Glynn's, is worth 8l. per fm.; and the 40, west of Shop shaft, 6l. At Sarah's shaft, the rise above the 14 contains a large and very promising lode, worth 10l. per fathom. The other parts of the mine are without much change.

PENHALE UNITED.—R. Pryor, H. Bennetts, J. Pryor, April 13: The lode in the 100, driving south of Phillips's engine-shaft, is worth 4 cwts. of lead per fathom, and likely to improve. The lode in the 90, driving south of ditto, is at this time a little disordered, and only worth 6 cwts. of lead per fathom; however, we expect from its appearance that it will again improve, the disorder being only temporary. The lode in the winze sinking below this level will yield 4 cwts. of lead per fathom.—Hall's Shaft: The sinking of this shaft is being pushed on with all dispatch, and will be completed to the 110 in the time named in our former reports. The lode in the 100, driving north of ditto, has a very promising appearance, and producing good stones of lead. The lode in the 80, driving north of ditto, has undergone a change for the better, being 2 ft. wide, composed of soft spar, mundic, and good stones of lead. There is no change in any other part of the mine.

PENHALE WHEAL VOR.—W. H. Martin, April, 13: We are pushing down the engine-shaft sinking under the 120, by twelve men, with all speed, so as to reach the 150 as soon as possible; the ground in the shaft continues just as for some time past. In the 120 north cross-cut, driving towards the main lode, there is a little change; the ground is mixed up with prian heads, dipping north towards the lode, and the water is also increasing.

PENRHYN.—Mark Whitford, April 8: In the adit end, driving on the north and south lode, the lode is 1 ft. wide, producing good silver-lead, but the ground is harder than it has been. In the winze sinking in the bottom of this level the lode is 1¼ ft. wide, with good stones of silver-lead; I think from the character of it we shall open out some good stopes. Everything at surface is being pushed on as fast as possible, so as to be ready for the engine with other work.

PRINCE OF WALES.—J. and W. Gifford, April 12: All points in the mine are being prosecuted with all speed, with no change to notice.

PRINCESS OF WALES (Callington).—T. Foote, G. Rickard, April 13: Harris's engine-shaft is down about 11 fathoms below the 35; the ground is still highly mineralised, being a beautiful looking killas, spotted with ore throughout.

ROARING WATER.—H. Thomas, April 12: There is a good change driving west at the 45, on Grady's lode, the quartz is considerably increased, and with it fine stones of yellow copper ore, and from present indications I think we may expect a valuable improvement very soon. During the past month we have driven 1 fm. 5 ft. 6 in.; the end is set to six men for the ensuing month for 9l. per fathom.

ROCHE CONSOLS.—Thos. Parkyn, April 12: Since my last report we have driven north 10 feet, and have cut into a lode containing rich work for tin. The lode is nearly 4 feet wide, and is of a promising character. This lode, with the other two already laid open, will yield immense quantities of rich tinstuff for the stamps.

ROSEWALL HILL AND RANSOM UNITED.—J. Daniel, S. Uren, April 13: Standard Lode: The lode in the 110, driving east of Ransom's shaft, is 9 in. wide, yielding saving work. The lode in the 110, driving east of shaft, is 2 ft. wide, and worth 6l. per fathom. The lode in the 90, driving east, on the north part, is 1 foot wide, producing saving work. The lode in the stope below this level is 2¼ feet wide, and worth 25l. per fathom. The lode in the 80, driving east, is 6 in. wide, and yields good stones of tin; we expect an improved lode here, as we are approaching the tin ground at work in the back of the level below. The lode in the 60, driving east, is 9 in. wide, and worth 6l. per fathom. The lode in the 50, driving east, is 1 foot wide, and worth 7l. per fathom. The lode in the winze sinking below this level is 1 ft. wide, and worth 10l. per fathom. The 100 fm. level cross-cut, driving north, is without change.—Eastern Carbona: This carbona, driving south, in the back of the 100, has improved since our last report, and is now worth from 25l. to 3 l. per fathom.—Middle Carbona: This carbona, in the back of the 60, is 4 ft. high and 5 ft. wide, and worth 25l. per fathom. On the whole, the tribute pitches are looking a little better since our last report.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, April 12: In the 71, west of King's shaft, the lode is worth about 50l. per fathom. In the 61, west of King's shaft, the lode is about 3 ft. wide, and has improved, being now worth about 20l. per fathom. In No. 2 winze, sinking under the 61, west of King's shaft, and now down about 6 ft., the lode is 5 ft. wide, and worth 50l. per fathom. In the 51, west of King's shaft, the lode is 2 ft. wide, and has improved, being now worth about 20l. per fathom; in the same level, west of King's shaft, on No. 1 north branch, the lode is 2 ft. wide, and worth 12l. per fathom. The stopes throughout the mine are looking well. There is nothing requiring remark at other points.

SOUTH DARREN.—John Boundy, W. H. Boundy, April 11: In the 70 west the lode is 2 ft. wide, and maintains a favourable appearance for lead. The lode in the 60 west is 3 ft. wide, and it has been gradually improving in size and appearance for some time past, and yielding some very good stones of lead and copper ore, worth 8l. per fathom. At this point I think there is a good prospect before us, as there is every indication of this end now opening into the run of ore ground which was passed through in the level above. The men are making fair progress in sinking the winze below the 50 to meet the 60, driving west; the lode in the same is 2 ft. wide, yielding good lead and copper ore, worth 10l. per fathom. The stopes throughout the mine are without much change since last report. Our dressing is being pushed on as fast as possible. Our machinery is all in good order.

SOUTH MERLLYN.—April 12: Vickers's Shaft: The 80 yard level south is getting into more settled ground; in a few yards further driving, from the nature of the ground, we may expect to get into something good. The lode is 3 ft. wide, composed of spar, clay, limestone, and stones of lead. We shall re-set to-morrow, when you shall be informed of the price. The 80 yard level north we have not sufficiently cleared to be able to form a sufficiently clear opinion concerning the value of the lode at this point. We shall report upon all points to-morrow (Thursday) after setting.

SOUTH VAN.—J. Richards, April 13: The lode in the end driving east has improved during the last few days, and presents a very kindly appearance. I am anticipating a further improvement daily as we obtain greater backs. The sinking of the shaft should be proceeded with as soon as possible, as I am convinced from the nature and indications of the lode at its present depth it will prove a profitable one at deeper levels.

SOUTH WARD.—Thos. Foote, April 11: We have cleaned up and cut down Thomas's engine-shaft to bottom, and which is about 9 ft. below the 10 fathom level, or 22 fms. from surface. Cleared out the cross-cut in the 10 fm. level from shaft to the lode, which is about 10 fathoms; at this point the timber is broken down, and the level full of stuff. Whether it is an old stull, or the backing given way, I cannot tell at present, but think it is the latter. I found in the stuff fallen down from the back come very good stones of lead, and am much pleased with the nature of the ground as far as seen. We shall clean out the 10 fm. level, north and south, as fast as we possibly can. So as to see more of the character of the lode, but shall not do anything at this shallow depth as regards driving, for it will scarcely be as low as the bottom of the river. We are also cutting ground for bearers and cistern in the 10 fm. level to fit standing-lift; as soon as this is done we shall commence sinking Thomas's engine-shaft as fast as possible, by a full pare of nine men. Our great object will be to push down the shaft as fast as possible to the 40 fm. level, at which point we may fairly calculate on having something very good. I had the pleasure of meeting Capt. Simmons, the Duchy agent, to-day, with some other gentlemen. I gave the former some of the stones of capel, quartz, and lead that I had taken out of the stuff from the 10 fm. level. He was much pleased with them, and told me he thought I had been at the old Tamar Mine for them. I must say the character is the same in every respect, and believe we have a good and lasting mine before us. Engine working first-class.

ST. JUST AMALGAMATED.—R. Pryor, Thos. Gundry, N. Bartle, April 12: Saveall's Lode: The lode in the 100, driving west of engine-shaft, is worth 3l. per fathom, with a good appearance. In the 90, driving west of shaft, the lode is 3 ft. wide, and worth 4l. per fathom. The lode in the 76, driving west of Saveall's lode, is worth 4l. per fathom. The lode in the 76, driving south of Saveall's lode, is worth 4l. per fathom. The lode in the 50, driving east of cross-cut, on Wheal Bozans lode, is worth 5l. per fathom, and improving.—North Lode: In the 62, driving west of cross-cut, the lode is worth 5l. per fathom. The lode in the 20, driving west of north shaft, is worth 3l. per fathom.—Pryor's Lode: The lode in the 40, driving west of cross-cut, is worth 5l. per fathom.—Owl Lode: The lode in the 40, driving north of Reddipper's shaft, is worth 6l. per fathom. The lode in the 10, driving north of West Buck shaft, is worth 5l. per fathom. There is no other change worthy of remark throughout the mine.

TAMAR VALLEY.—J. Goldsworthy, April 13: In the 57 north, on the Tamar Valley lode, the several parts are nearing each other, and presenting a better appearance. There is no change in the character of the lode in the 57 south since last reported on. In the 37 south, on the old lode, satisfactory progress is being made. In the 27 south the lode is looking very promising, and opening out good tribute ground. This part of the mine is opening up very well indeed.

TANKERVILLE.—John Smithson, April 12: Everything going on well in the mine throughout, quite as well as when Capt. Waters wrote last week.

TAN-YR-ALLT.—Richard Evans, April 9: We have sunk the new engine-shaft, since last reported, 4½ ft.; we have now nine men at work, and shall put three men more with them next week. I expect this shaft will be sunk with good speed now the engine and pitwork are in good working order. There is still a fine course of lead ore in the bottom. There is no change in the adit level east since last week. The winze in the bottom of this level is down about 4 ft. 6 in. We have here a very strong lode, composed of spar, gossan, and some fine stones of lead ore. We are getting on with the surface operations as fast as possible.

TREVEDDOE.—Capt. Rowse, April 12: We have cut through the lode, which is 5 ft. wide, good work for tin, still worth 1 cwt. of tin per ton of stuff; going west it is producing stones of grey copper ore 3 cwts. in a stone, making a produce of 55 per cent. for copper. We are taking down a piece of ground west of present workings, and in a few days hope to report a very grand discovery.

VAUGHAN.—April 12: In the deep adit level east the ground is composed of a light clay-slate, beds of grit, and branches of carbonate of lime, and the ground harder for exploring. The western deep adit level north, at Fronfeirig, the ground is much of the same character as when last reported on.

WEST CARADON.—W. Johns, N. Richards, April 12: Marina's shaft, sinking below the 55, on Clymo's lode, is still worth about 1½ ton per fathom. The 55 cross-cut north and the 42 south of this shaft are progressing very satisfactorily towards Allen's and Jope's lodes. Allen's lode, in the 42 west, is about 1 ft. wide, spotted with ore. The lode in the 42 east is divided by a horse of granite, producing 1 ton per fathom. On the lode sinking in the winze below this level we have met with a slide, which has disordered the same for the present. Two stopes in the back of this level—No. 1, worth 2 tons per fathom; No. 2, 3 tons per fathom. In the winze sinking below the 30 we are opening out tribute ground. The same remarks are applicable to the 27, west of Crouch's shaft, on Allen's lode.

WEST JEWELL.—John Mayne, April 13: During the past week we have cut down and cleared up 3 fms. of Greene's shaft, and the men are now engaged in fixing the timber on the top of the shaft, and when complete we hope to sink faster. We have sunk Freeman's shaft 6 fms. to cut the south tin lode, through a beautiful channel of ground. There is a great chance here when we cut the lode embedded in such strata for the production of tin. The tributers' pitches still look well, and we expect to sell as much tin the next two months as we did the last.

WEST MARIA AND FORTESCUE CONSOLS.—William Skewis, James Donnal, April 14:—West Maria lode: In Willsford's shaft the top plat is almost completed at the 71. No lode is being carried in the 71 east and west; the drivage is by the side. The part of the lode carried in the 60 east is 3 ft. wide, and worth 35l. per fm. The lode in the winze in bottom of the 63 east is 6 ft. wide, worth 100l. per fathom. There is no change to call for any remark in any other part of the mine.

WEST PANT-Y-GO.—April 12: The engine went to work this morning, and we shall soon have the water in fork, when the tributers will be put to work, and the cross-cut at the 70 north driven.

WHEAL AGAR.—E. Rogers, April 13: In the 140, east of engine-shaft, we have cut into the lode east of the cross-course about 2 ft., without finding the south wall, and as far as seen is looking very promising, producing good work for tin, much better than it was near the cross-course to the west, and it has drained the 130 east quite dry, which before was very wet. Nothing has been done in the 140 west since my report for the meeting, and all the shaftmen are now engaged in putting down the skip-road. There is no change in the 130 east, still worth 30l. per fathom. We have not taken down the lode in the winze sinking below the 130 fathom level west since last report. Other parts of the mine are without change.

WHEAL BULLER.—James Inch, April 13: We are pushing on the sinking of Hocking's shaft with all speed, but there is nothing new in this part of the mine since my last. We have commenced to sink Stevens's shaft, where the lode is looking well. I shall be able to report more fully on this point in my next. The mine altogether is looking better, and from the present appearances the returns will increase.

WHEAL CREBOR.—J. Goldsworthy, April 13: In the 117, driving west of Kelly's shaft, the leading part of the lode is 4 to 5 ft. wide, of a promising character, and is producing saving work, and promising to improve. In the 120, east of Cock's shaft, in the cross-cuts north and south, nothing of importance up to this time has been met with. In the rise in back of the 96, east of Cock's shaft, the lode is 3 to 4 ft. wide, exceedingly promising, and producing from 2½ to 3 tons copper ore per fm. In the 96 cross-cut south fair progress is being made. In the winze sinking below the 84, east of Cock's shaft, the sinking is continued by the side of the lode. The tribute pitches are altogether without any change since last reported on.

WHEAL FRANCO.—W. Doidge: Sutton's Shaft: In consequence of cutting water there we have commenced to drive west from this shaft, on the footwall of the lode, where its composition is much the same as last reported on, producing very rich stones of black and grey ore, a sample of which I have sent to the office. It will be necessary for us, after extending this level about 10 fathoms, to cross-cut through the lode, which is of the extraordinary width of 30 feet. The adit level, which we are pushing on with all possible speed, will in about 30 fathom more driving unwater Sutton's shaft, we expect, to the old 26 fm. level, and enable us to set many tribute pitches. Our driving west will every 10 fathoms give us about 3 fathoms more backs, being towards the hill.

WHEAL FRIENDSHIP.—April 11: Bennett's Lode: The 170 is still being driven in clear ground, west side of the great cross-course, and meeting with no measure of water we expect more cross course to be still ahead. In the 150, west of Whitburn's cross-cut, the lode is about 18 in. wide, containing a little copper ore, but not to value. In the winze sinking under the 150 the lode is from 2½ to 3 ft. wide, worth 40l. per fm. for the length of the winze, 9 ft. Two stopes under the 150 are worth 1½ ton of ore per fm. each. Two stopes below the 140 will yield 1½ ton per fm. each. The stopes in back of the 140 will yield 1 ton per fathom. No change in the 90 fm. level cross-cut, south of Curtis's, in the Globe.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, April 9: The lode in the 110 east is producing stamping work. The lode in the 100 east is worth 10l. per fathom, and the lode in the 90 east is worth 15l. per fathom. The new lode in the 80 east is worth 28l. 10s. per fathom; and the lode in the western end it is also worth 28l. 10s. per fathom. In the bottom of the level there is a lode that will turn out nearly 15 cwts. of tin per fathom. The 66 fm. level cross-cut is driven nearly 3 fms., and we think we shall reach the lode in time stated.

WHEAL KITTY (St. Agnes).—Wm. Polkinghorne, Stephen Davey, April 9: New Shaft, Pryor's Lode: In this shaft, sinking below the 106 fm. level, there is nothing new to report on. In the 106 fathom level, driving west of shaft, the lode is 2½ feet wide, and worth for tin 15l. per fathom. In the 106 fm. level, driving east of shaft, the lode is worth for tin 15l. per fathom. In the 94 fm. level, driving west of shaft, the lode is worth for tin 14l. per fathom. In the 94 fm. level, driving east of shaft, the lode is worth for tin 6l. per fathom. In the winze sinking below the 94 fm. level, west of shaft, the lode is worth for tin full 16l. per fathom. In the 82 fm. level, driving west of shaft, the lode is 4 ft. wide, and worth for tin 11l. per fathom. In the 82 fm. level, driving east of shaft, the lode is poor.—Old Lode: In the 82 fm. level, driving west of Holgate's shaft, the lode is worth for tin 4l. per fm.—New Lode: In the adit level, driving east, the lode is at present poor. During the week we have holed the shaft to this level, which has given good ventilation.

WHEAL SPARNON.—Wm. Tregay, April 9: The lode in the adit east end produces gossan and stones of copper ore, and is surrounded by strata congenial for mineral production.

WHEAL UNY.—W. Rich, Mathew Rogers, S. Coade, jun., April 9: The lode in the 150 fm. level end is looking promising to improve; it carries more tin, and has a better appearance generally, now worth 12l. per fathom. The lode in the 150 fm. level west is worth 10l. per fathom. The rise in the back of this level is worth 10l. per fathom. The rise in the back of the 150 fm. level east is worth 20l. per fathom. There is nothing new to notice in the other bargains since our last report. We are forcing on the sinking of Hind's engine-shaft as fast as possible.

WHEAL TRELAWNY.—Wm. Johns, Thomas Grenfell, J. Pryor: At Trelawny's engine-shaft, in the 230, both north and south, we are going on by the side of the lode; however, the ground in the south end is similar to what we had in the 210 south, and, seeing this, we anticipate a speedy improvement. In the 220 north we we have not cut into lode since last reported, but intend doing so shortly. In the 210 south the lode is worth 20l. per fm. The rise in back of this level, within a short distance from this end, is worth 15l. per fm. In the 222, at Smith's engine-shaft, we are cutting through the capels of the lode, and by cutting a vugh we have drained the upper level between this and Chippendale's shaft; this looks very kindly. In the 210 south we have not taken down any lode since our last settings. In the 210, north of Chippendale's, we shall commence shortly to take down the lode; and, judging by its appearance, we fully expect an improvement. Although we are not as rich as we could wish, yet, upon the whole, the mine is presenting a better appearance.

THE CORNISH MINE SHARE MARKET.—During the week the Cornish Mine Share Market has received fresh stimulus to activity by another rise in the Tin Standard, which, following as it did other successive advances, and being undoubtedly quite warranted by the present extremely buoyant conditions of the tin market, has naturally improved the quotations of, and at the same time strengthened the demand for, the majority of the leading tin stock. But holders, even at the present enhanced prices, do not seem at all anxious to accept the offers making for their shares, apparently believing that still higher rates may soon be obtainable—the consequence of which is that, although dealings are by no means rare, the amount of business actually transacted in the share market daily does not come up to what might be at first expected.

THE STANNARIES COURT.—There have been plenty of revilers of the Stannaries Court and its doings, but there is a vast deal to be said in its favour. At East Wheal Lovell meeting, on Thursday last, an adventurer said he had some experience in these matters, and he was enabled to say that, as far as Cornish mining was concerned, the Stannary Court was one of the greatest blessings they had had, for what would have been done during the great panic if it had not been for the Stannaries Court? Why they would have had to have gone to the Court of Chancery.

TRESAVEAN.—The present adventurers, encouraged by the fact that copper ore of the value of 1,500,000l. was raised from a shoot which lasted from the 129 to the 300 fm. levels, have driven the deep adit 265 fms. west, the shallow adit 108 fms., and the 12 fm. level 148 fms.: 60 fms. of gossan above the deep adit have yielded 5027l. worth of ore. Captain Odgers reports:—"I fell assured that if there is another bunch of ore to be found in Cornwall there is one to be found near this place. The mine never looked so promising as at this time."

The boring machine in this country is evidently yet in its infancy.

Some of our agents do not hesitate to affirm that the boring machine is, so far as practical utility goes, no further forward than the steam-engine was when Bolton and Watt took it in hand; but they have great hopes as the future.

At the present time Sir William Williams's family are taking up over 3000*l.* a year in the way of dividends at Dolcoath Mine, but this is a small sum compared with what Mr. Richard Hawke, of Liskeard, takes up at West Chiverton, which is considerably over 12,000*l.* annually.—*West Briton.*

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Prof. Smyth's Lectures at the Royal School of Mines—Original Correspondence: Trelogan Mine, Flintshire; Coed Talon and Leeswood Collieries, Flintshire; Utilisation of Refuse Shale (E. G. Buttery); Coal between the South Staffordshire and Shropshire Fields; Mining in California (T. Faull); Cuiaba Gold Mining Company (E. Oxenford); Mining in Prussia; Cardiganshire and Montgomeryshire Mines in Depth (A. Francis); Roche and Lanivet Mines; Mining in St. Neots; Barytes Mines; Copper Trade, and High Royalties (A. Bennett); North Hendre Mine, Flintshire; Mine Agents, and the Market (East Lovell); Van Mine and its Neighbours (J. Lean)—New Self-Acting Calciner—Improvements in the Separation of Copper (P. Spence)—Treating Pyrites, to obtain Silver and Lead (W. Wright); Foreign Mines Reports—South Midland Institute of Mining, Civil, and Mechanical Engineers' Meeting—Royal Cornwall Polytechnic Society, &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, APRIL 14, 1870.

COPPER.	£ s. d.	£ s. d.
Best selected..p. ton	73 0 0-	—
Tough cake and tile	71 0 0-	—
Sheathing & sheets.	75 0 0-	—
Bolts	77 0 0-	78 0 0
Bottoms	78 0 0-	—
Old (Exchange)....	63 0 0-	—
Barra Burra	73 0 0-	73 10 0
Wire.....per lb.	0 0 10-	—
Tubes	0 0 11-	—

BRASS.	Per lb.
Sheets .....per lb.	8½d.-9d.
Wire ..... "	7½d.- —
Tubes ..... "	10½d.-11½d.

Yellow Metal Sheath.p. lb.	6¼d.-6¾d.
Sheets ..... "	6¼d.-6¾d.

SPELTER.	Per ton.
Foreign on the spot	£19 15 0-20 0 0
" to arrive ..	19 5 0-19 15 0

ZINC.		
In sheets	£24 0 0-	—
QUICKSILVER (p. bottle)	(nom.)	6 17 0

TIN.		
English blocks ..	£132 0 0-	—
Do., bars(in brls.)	133 0 0-	—
Do., refined.....	136 0 0-	—
Banca	133 0 0-	—
Straits	131 0 0-132 0 0	

TIN-PLATES.*	Per box.
IC Charcoal, 1st qua.	1 6 6- 1 8 0
IX Ditto, 1st quality	1 12 6- 1 13 6
IC Ditto, 2d quality..	1 6 0- 1 6 6
IX Ditto, 2d quality..	1 12 0- 1 12 6
IC Coke.....	1 3 0- 1 3 6
IX Ditto	1 9 0- 1 9 6
Canada plates,p.ton..	13 10 0-14 10 0
Ditto, at works	13 0 0-14 0 0

* At the works, 1s. to 1s. 6d. per box less.

IRON.	Per ton.	
Bars Welsh, in London	7 2 6-	7 5 0
Ditto, to arrive	7 5 0-	—
Nail rods	7 5 0-	7 10 0
" Staffd. in London	8 5 0-	9 0 0
Bars " ditto	8 0 0-	9 0 0
Hoops " ditto	8 17 6-	10 15 0
Bars " at works..	7 15 0-	8 0 0
Hoops " ditto	8 2 6-	8 5 0
Sheets, single	9 15 0-	11 0 0
Pig No. 1, in Wales ..	3 15 0-	4 5 0
Refined metal, ditto..	4 0 0-	5 0 0
Bars, common ditto..	6 15 0-	—
Do., rch. Tyne or Tees	8 10 0-	—
Do., railway, in Wales	6 12 6-	7 0 0
Do., Swed. in London.	9 15 0-	—
To arrive	9 12 6-	—
Pig, No. 1, in Clyde ..	2 18 6-	3 5 6
Do. f.o.b. Tyne or Tees	2 9 6-	—
Do. Nos. 3,4, f.o.b. do.	2 6 6-	2 7 0
Railway chairs	5 10 0-	5 15 0
" spikes	11 0 0-12 0 0	
Indian Charcoal Pigs, in London, p. ton..	6 0 0-	6 10 0

STEEL.	Per ton.
Swed., in kegs(rolled)..13	10 0-13 15 0
" (hammered)..14	15 0- —
Ditto, in faggots 15	15 0-16 0 0
English, spring 17	0 0-23 0 0

LEAD.	Per ton.
English Pig, com.....18	10 0-18 12 6
Ditto, LB.....18	15 0- —
Ditto, WB 19	10 0- —
Ditto, sheet.....19	0 0-19 5 0
Ditto, red lead 20	0 0-20 10 0
Ditto, white 27	0 0-30 0 0
Ditto, patent shot....22	0 0- —
Spanish.....18	0 0- —

REMARKS.—The retrospect of the past week is, on the whole, more satisfactory than at the close of the previous week we had reason to anticipate. Perhaps there has been no direct or immediate cause to account for the incease of animation which has become apparent, but it may have resulted from a combination of circumstances which have operated favourably upon certain branches of trade, and which, we trust, may continue to exercise a yet more positive and universal influence in time to come. It seems that at last we have really bid farewell to winter, and the agriculturists are already beginning to speculate upon their future prospects. Let never so many adverse influences combine to check the development of trade, a really good harvest would do more to counteract such opposing forces than anything else. There can be no doubt about our having pretty well seen the back of our panic troubles of 1866. Inconvenient calls have nearly all been met or arranged. The houses that were going to stop have stopped long since, and their affairs been wound up. Young houses have started in their place. The infusion of fresh blood into the system is always good, and those entering the field now have before them the salutary experience of the past five years to warn them from the commission of blunders which were attended with such disastrous results. The budget of the Cancellor of the Exchequer has been well received in commercial circles. It is pleasant to be dealing with a surplus, and now that a real substantial surplus has been secured the public congratulates itself, and cares not to ask how or at what cost it has been obtained. There is the surplus, that is the great fact, and there is a corresponding present reduction in taxation, a pleasant prospect. There is also an increasing abundance of money floating about the country, the owners of which are looking out for profitable investments for the same. The political horizon, too, though not without cloud, is still of such a character as generally to inspire confidence. Telegraphic communication with the East is now approaching perfection. News from India already travels quicker than the sun, and great efforts are being made to perfect the system, by continuing the cables to the far East, so that they shall extend to Singapore and China. The Singapore extension is progressing very rapidly, and there can be no doubt from past experience that few causes tend more to the expansion of commerce than the extension and development of the railway and telegraphic systems throughout the world. And, further, while indirectly these engineering marvels are so revolutionising the commercial world, and opening up fresh fields for the introduction of various branches of commerce, their very construction affords an important and direct auxiliary to the development of the metal trade, inasmuch as in proportion to their extension is the consumption of iron, copper, and other metals vastly increased.

COPPER.—The demand for manufactured has not in any way improved. Prices have been sluggish through the week. The last charters announced from Chili have again proved large, being about 2400 tons, which consequently affords no relief to our present overburdened stock, nevertheless efforts are being made by the holders, who have retained so large a stake in Chili produce, to realise, if possible, higher prices, and which in some instances have proved successful. There is still, however, want of confidence in the copper market, so that this slight improvement may prove to be but temporary; and it is not improbable that this mere speculative enquiry, which has so suddenly sprung up, may as suddenly subside, and there is every prospect that these prices will again recede to those which have previously been accepted; and, should the next charter again prove heavy, there is no doubt that prices will go lower than they ever yet have gone. Those who having watched the turns of the market with much care, and not holding any pecuniary stake in it, are capable of forming a disinterested opinion with regard to the future, are not sanguine that there is any probability of recovery so long as Chili and other sources continue to supply the market to an extent so much in excess of demand.

YELLOW METAL.—Orders continue to be given out and taken for 4 by 4 Indian sheets, at 6¼d. per lb. Sheathing, 6¾d. A slight attempt has been made on the part of one or two smelters to obtain higher prices, but it is doubtful whether buyers will give at all more than present quotations.

IRON.—Scotch Pig: Prices have advanced, owing to strong buyers, and, according to advices from reliable sources, there seems a probability of a still further advance being established, unless such may be to some extent retarded in consequence of the Easter recess; but as this does not affect the iron district north of the Tweed it will not, probably, materially influence the market. Rails are in demand, and sellers are stiff in their prices, adhering to last week's rates. Staffordshire descriptions show no variation in quotations, but the market is, if anything, rather firmer. With the apparent rise in the price of pigs, it is not unlikely that higher prices may be demanded for rails and bars, should they continue in good request.—Swedish Iron: Sellers are prepared to make concessions to secure buyers, but even the quotation of lower rates than have of late been current fail to tempt purchasers. The advices from the other side are not sufficiently encouraging to induce shipments to the East just at present.

LEAD.—There is no improvement to be observed in the position of this metal. Large supplies have gone forward, and lower quotations on the part of sellers do not tempt buyers to operate extensively. No doubt the capacity of China to absorb a large quantity of pig-lead is very great, but as much depends upon the out-turn of the tea season, and as shipments to China are already large, merchants are not disposed just at present to increase stocks. The northern ports being now open, the demand for Russia may set in, and thus arrest a further downward tendency in the market.

QUICKSILVER.—The position of this metal remains unaltered. Very small orders for home consumption can be executed, but none can be obtained for export.

STEEL.—Nothing whatever to report in Swedish steel. The market is utterly inanimate.

SPELTER.—The market stands about 19*l.* 15s. to 20*l.* sellers for Silesian, and about 5s. less buyers. Stocks here continue very low, but as spring shipments are likely to be soon arriving, any upward tendency in prices is likely to be impeded.

TIN.—Higher prices both in London and Holland continue to be paid for Straits and Banca. Each day the market attains a higher position, and better prices are realised. It is impossible that this state of things should go on interminably, and a sharp reaction might set in at any moment, still, however, appearance seem to indicate a steady market for the present. Straits tin sold at 132*l.* Banca in Holland reported 77 fls., buyers.

TIN PLATES.—A further reduction of the make was discussed at the Gloucester meeting, and it was understood that the majority of manufacturers would adopt the course suggested.

THE TIN TRADE.—The position and prospects of the tin trade are carefully pointed out in an interesting circular just issued by Messrs. Haakman and Stadnitski, of Amsterdam. After explaining the movements in the market up to the date of the Banca sale, remarking that in the speculative transactions the real value of the metal was but little, if at all, taken into consideration, they proceed to sketch the position of affairs in Banca, Billiton, Straits, and Cornish tin. They show that the stock of Banca was 50,000 slabs less on Jan. 1 last than than at the corresponding period of 1869. The production of Billiton was 6000 slabs less in 1869 than in either of the two preceding years; and the total export of Straits was 104,519 peculs in 1869, against 99,708 peculs in the preceding year. In Cornwall the yield remains about stationary. Taking all the circumstances into consideration, they remark that, whatever professional bears may say to the contrary, the present price of the metal ought to be regarded as moderate, and the prospect is such as should inspire the greatest confidence.

THE COPPER TRADE.—Messrs. J. Pitcairn-Campbell (Liverpool, April 13).—There is a decidedly improved feeling in the market, with an active demand at quotations. The movement in Chili bars is, to some extent, speculative, but English copper has moved off more freely, and the tone is, on the whole, healthier. Quotations are—66*l.* 10s. to 67*l.* for Chili bars, 70*l.* 10s. to 71*l.* for Urmeneta, and 69*l.* 10s. to 70*l.* for Lota ingots; 13s. 1½d. for good Chili ore and regulus, and 14s. 9d. for Corocoro Barilla. Business transacted during the fortnight comprises—On the spot here, 700 tons bars, at 65*l.* 15s. to 67*l.*; and 151 tons ingots, at 70*l.* 10s. per ton. To arrive here—268 tons bars, at 66*l.* 5s. to 67*l.* 10s.; 50 tons Lota ingots, at 69*l.* 5s.; and 648 tons regulus, at 13s. 1½d. per unit. On the spot at Swansea—100 tons regulus sold at 13s.; and to arrive there, 730 tons ore, and 340 tons regulus, at 13s. 1½d. per unit. About 2000 tons Moonta ore sold at 13s. per unit, and about 450 tons Newfoundland and Cape ore at 13s. to 13s. 1½d. per unit. Arrivals here during the fortnight from West Coast, S.A.—Anonyma, from Valparaiso, with 807 tons ore; Llama, from Lota, with 340 tons bars, 276 tons ingots; Estrella, from Guayacan, with 827 tons bars; Lebu, from Carrizal Bajo, with 338 tons regulus. At Swansea—Emmeline, from Sarco, with 730 tons regulus; Rose of England, from Carrizal, with 600 tons regulus; Uncas, from Tocopilla, with 340 tons ore, and 285 tons regulus; Glamorgan, from Coquimbo, with 830 tons regulus. Stocks of copper (Chilian and Bolivian) in first and second hands likely to be available are—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	1932	2707	9907	1061	120
Swansea	3300	5800	1247	315	242
Total.....	5232	8507	11,154	1376	362

Representing about 17,700 tons fine copper, against 10,000 tons April 15, 1869; 7300 tons April 15, 1868; 10,700 tons April 15, 1867.

Messrs. James and Shakspeare—Smelters have bought rather freely of ore and regulus, at 13s. and 13s. 1½d. per unit, about 4000 tons having been taken during the week, and sellers are now inclined to hold for a slight advance. In bars, several hundred tons on spot were purchased on Saturday last, at 66*l.* 10s. per ton, one or two lots having been disposed of on the previous day at 5s. less, and immediately the transactions at the higher rate were known, holders demanded 67*l.*; to this rapid rise buyers have not yet responded freely, though we hear of some small sales having been made at the extreme rate, but as the Easter holidays are now at hand, it is difficult to say what course the market will take, as many operators will be absent during the next six or seven days, and we, therefore, anticipate a rather quiet trade during the interim. On the 11th inst. telegrams came to hand advising the Chili charters for the last fortnight in February, as equal to about 2300 tons pure, of which 800 tons were in bars and ingots, 1400 tons in ores and regulus for England, and 100 tons in bars for the Continent. In Australian sorts there has not been much doing, but the quotations have improved about 10s., in sympathy with the move in Chili bars. English in fair demand for tough and select, and smelters are beginning to refuse orders at their official quotations; manufactured sorts, however, continue dull.

Messrs. Vivian, Younger, and Bond—On Monday the cablegram was received from New York advising that the charters from Chili for the fortnight ending March 2 were about 2250 tons of fine copper—850 tons in bars and ingots, and 1400 tons fine in ores and regulus. On receipt of this news a stronger feeling showed itself, and the demand became more active. In Chili produce 67*l.* cash is reported to have been paid for good ordinary brand bars, and several cargoes of ore and regulus have been sold at 13s. 1½d. per unit. English copper has also advanced, and there is little to be had under smelters' quotations.

TIN.—There has been a large demand both for English and foreign sorts at advancing prices. Straits being reported at 131s. cash. The market closes with an upward tendency. In other metals there is nothing special to note

THE IRON TRADE (Griffiths' Weekly Report).—The Quarter-Day, which was held at Birmingham on Thursday, was well attended, and a large business was done in marked Staffordshire bars and other sorts usually contracted for by London buyers at this meeting. The list price for Staffordshire bars of known brands was invariably paid, and the general feeling of the meeting was favourable to the future prospects of the trade. Our market for iron has been steady this week, with little variation since our last report in the sorts of iron most in request. The Quarter-Day being now over and prices settled for the present, we look for a gradual improvement in the trade as the summer advances. The Tin-Plate Trade continues in a more healthy condition than it was at the beginning of this year.—75, Old Broad-street, London, April 15.

The settlement of the fortnightly account in the MINING SHARE MARKET has been very heavy this week, and as there was evidently a short supply of stock for delivery in one or two prominent mines lately depressed in price, it seemed as though the prices had been lowered as much by heavy "bearing" operations as by the failures of large speculators for a rise.

Tin has advanced a further 3*l.* this week. The mines mostly dealt in have been Van, Van Consols, Tankerville, East Lovell, Wheal Agar, Prince of Wales, Great Retallack, Providence Mines, Rosewall Hill and Ransom, Chiverton Moor, Chiverton Valley, Drake Walls, Great Laxey, New Lovell, Tincroft, West Frances, West Maria and Fortescue, West Chiverton, and a few others.

In Foreign Mines a good deal has been done in Australian United, in anticipation of the mail next week, in Don Pedro, Guerrero, Braganza, Pacific, and Taquaril.

Vans have remained quiet at 75 to 80. Van Consols have been in good demand, and leave off at 3⅜ to 3¾. Tankerville have also been largely dealt in, and advanced to 16¼ to 17¼. Assheton, 9 to 10; Bronfloyd, 4 to 4¼. Great Laxey, 18 to 18¼; the general meeting was held on Wednesday, when the report was of a very satisfactory character. We gave a statement of the accounts last week, and in another column full particulars of the meeting will be found. The shafts and ends in the mine are worth in the aggregate 790*l.* per fm., and the richest course of ore is in the bottom of the mine.

Great Retallack, 1 to 1¼: 7 ft. more have been taken down of the lode, and it produced 35 cwts. of silver-lead, a fair sample of which produced 81 per cent. of lead, and 20 ozs. of silver to the ton. The prospects of this mine are now better than when shares were at 5*l.* each, but, owing to the rage for Welsh and Shropshire mines, it is almost neglected. Chiverton Moor, 5 to 5¼; Devon Great Consols, 90 to 100; Drake Walls, 25s. to 27s. 6d. East Grenville, 2 to 2¼; the lode in the 55 end is worth 5 to 6 tons of yellow ore per fm.; eastern stope, 4 tons; 45 east, 1¼ ton. Bwlch Consols, 3½ to 3¾; a considerable discovery is reported in the 60 end east, producing 3½ tons of rich ore per fathom. Chiverton Valley, 4¼ to 5; Dolcoath, 132½ to 135, ex dividend of 3*l.* per share; East Caradon, 4¼ to 4¾; East Lovell shares have advanced to 25, 26. Gwydyr Park, 1 to 1¼; at the meeting the accounts showed a balance of liabilities over assets of 78*l.* 17s., and a call of 9d. per share was made. The prospects of the mine are very favourable, and a special meeting will be held early in May, to place the company under the Limited Liability Act, in 12,000 shares. At present the company is under the Cost-book System, in 6000 shares, 1*l.* 15s. paid. Great Western, 35s. to 40s.; Great Wheal Vor, 11½ to 12½; Marke Valley, 6¾ to 7½; Minera, 165 to 175; New Lovell, 2 to 2¼; North Crofty, 2½ to 3¼; North Treskerby, 12s. 6d. to 14s. 6d.; Prince of Wales, 16s. to 18s.; Providence Mines, 38 to 40; Rosewall Hill and Ransom United, 20s. to 25s.; South Condurrow, 25s. to 30s.; Tan-yr-Allt, 5½ to 6½; Tincroft, 30½ to 31½; West Caradon, 1¼ to 1½; West Chiverton, 54 to 56; West Frances, 56 to 58; West Maria and Fortescue, 2½ to 2¾; West Seton, 135 to 145; Wheal Agar, 2⅜ to 2¾; Wheal Basset, 55 to 65; Wheal Grenville, 1⅞ to 2⅛; Wheal Kitty (St. Agnes), 6½ to 6¾; Wheal Seton, 25 to 27½; Australian United, 2⅞ to 3⅛; Don Pedro del Rey, 4⅛ to 4¼; General Brazilian, 16s. to 18s.; Guerrero, 7s. 6d. to 12s. 6d.; Pacific, 8½ to 9; Taquaril, 18s. to 20s. Chontales, 20s. to 25s.; the gold remitted this month is 254 ozs., at a cost of 670*l.* Good improvements have taken place at San Antonio and Trinidad. Braganza, ⅛ to ⅜; a telegram has been received that another lode has been cut, worth 4 ozs. of gold to the ton.

The market for Mine Shares on the Stock Exchange has, during the week, been dull. Business has been interrupted by the settlement, further failures, and the holidays, and there has been no special feature in any of the mines to notice. Van shares are steady, at 76½ to 78½; the cross-cut towards the lode, in the 45, is producing rich leaders of lead in the country. There is yet about 9 ft. to drive to cut the lode, which will take about a week or ten days to accomplish. The lode in the cross-cut in the 15, 94 fms. west of the engine-shaft, is worth 5 tons of lead per cubic fathom. The cross-cut 54 fms. west, in the same level, is also in a very rich course of ore. The various points of operation in the 30 continue to open great courses of ore, and the reserves are being added to in a ratio of more than ten times the amount of present returns. Pacific shares, owing to failures of dealers, have been run down to 8⅛, 8¾. The advices from the mines are satisfactory. The lode at the shaft at Union Hill is showing free gold, and a new level, giving 100 ft. of backs as reserves, will be gained by the middle of next month; the lode is quite as promising as at Eureka at the same depth. Eureka profits are equal to over 7000*l.* monthly. The Lander Hill Level Mine is very promising, and giving good returns of silver. Sweetland Creek, ⅜ to ½ prem. A telegram has been received this week intimating that the profit for 21 days run was over $6000, or 1200*l.*, and advices are to hand confirming all the reports formerly received from the mines. Tankervilles are in demand: 100 tons of lead has been sold at 12*l.* 14s. 6d. per ton; shares are 16 to 16¼. Assheton and Tan-yr-Allt have improved. Great Laxeys are enquired for. Some business has been done in Wheal Agar, closing 2⅜ to 2¾. East Lovells are flat, at 24 to 25. Bwlch Consols Mine has greatly improved. Subjoined are closing quotations:—Assheton, 9¼ to 9¾; West Chiverton, 55 to 57; Chiverton Moor, 5 to 5¼; East Caradon, 4 to 4¼; Great Laxey, 17¾ to 18¼; Great Wheal Vor, 11 to 11¼; Marke Valley, 7¾ to 8; Prince of Wales, 15s. to 17s.; Tan-yr-Allt, 5¼ to 5¾; West Stipperstones, 1¼ to 1½; Van Consols, 3¼ to 3⅜; Anglo-Brazilian, ⅛ dis. to par; Chontales, 1 1-16th to 1 3-16th; Don Pedro, 3⅛ to 3⅜ prem.; Frontino, ¾ to ⅞; General Brazilian, ⅛ to ¼ prem.; Pestarena, 1 to 1¼; Port Phillip, ⅝ to ¾; Rossa Grande, ⅛ dis. to par; St. John del Rey, 20½ to 21½; Taquaril, 6s. 3d. to 8s. 9d. prem.; United Mexican, 2¼ to 2⅜; Yudanamutana, 6½ to 6¾; Wheal Basset, 55 to to 65; Devon Consols, 95 to 105; Cae Gynon, 2¾ to 3¼; West Caradon, 1 to 1¼.

The Standards of Tin Ore were advanced on Tuesday, and are now as follows:—Common, 120s.; superior common, 121s.; fine, 122s.; superior fine, 123s.

The SOUTH ST. JUST TIN MINING COMPANY has been formed, with a capital of 10,000*l.*, in shares of 2*l.* each, and with an influential board of directors, for the purchase and more extended development of a series of tin lodes in the St. Just district, which has long been celebrated for its richness. The prospect of the tin trade at the present time is considered to be equal, if not superior, to that of any other metal. One of the best informed of the Dutch firms writes that unless the Government are willing to give a new edition of the goose with the golden eggs it is doubtful whether the quantity of tin forwarded from Banca to Holland will continue at the same rate as in 1869; and this, taken in connection with the fact that the stock at Banca was nearly 10 per cent. less at the end of 1869 than at the end of the preceding year, that the production of Billiton was 10 per cent. less in 1869 than in 1868, and that the demand for tin in Europe and America has been larger than previously, is considered to afford ample grounds for presuming that a period of great prosperity for Cornish tin mines is approaching. There is already an abundance of machinery on the mine, in efficient working order, and the royalty is only 1-24th. The purchase money for the mine and machinery complete, and all rights belonging to the property, is fixed at 5000*l.*, of which one-half is to be paid in cash and the remainder in fully-paid shares. The prospectus will be found in another column of this day's Journal.

A prospectus has been issued of the PHŒNIX SILVER-LEAD AND BLENDE MINING COMPANY (Limited) for the purpose of carrying on a mine in Prussia. The board of direction is sound and good. The capital 30,000*l.*, in 15,000 shares of 2*l.* each. The characteristic features, as stated, are—that the grant of the mine is in perpetuity from the Crown of Prussia, the royalty 1-50th, as against an average royalty in this country of 1-15th, making an immense difference in favour of the shareholders; that there is lead ore enough discovered to pay dividends at the rate of 10 per cent. on the capital. The reports of Capt. Thomas Rickard, late of the Pontgibaud mines, Capt. Samuel Richards, formerly manager of Trehane Lead Mine, and Capt. Thos. Trevillian, of Herodsfoot Mine, near Liskeard, are appended to the prospectus, and they, "One and All," speak most highly of the undertaking, and fully justify the statement in the prospectus that 10 per cent. dividend can be paid forthwith from ore already discovered, and express their confident conviction that very large profits will be made with vigorous and economical working. There are three good steam-engines on the mine—ample for carrying out a large mine, and used for pumping, hauling, and dressing ore.

The TUOLUMNE GOLD COMPANY have issued their letters of allotment, and the directors have convened a general meeting for April 25, for the purpose of submitting to the shareholders additional information with regard to their property. It is expected that several gentlemen will be present who have long been associated with the working of the mine.

At Dolcoath Mine meeting, on Monday, the accounts for January and February showed a profit of 4532*l.* 17s. 10d. A dividend of 4296*l.* (3*l.* per share) was declared, carrying forward 910*l.* 19s. 3d. [The agents' report is among the Mining Correspondence.]

At East Wheal Lovell meeting, on April 7 (Mr. H. Rogers in the chair), the accounts showed a credit balance of 4247*l.* 7s. 11d. The sales of ore are included up to April 6, and the mine cost to January. A dividend of 3812*l.* (2*l.* per share) was declared, leaving 435*l.* 7s. 11d. to be carried forward to the credit of the next account. It was agreed that the inspection day be on every alternate Wednesday, and that the next inspection day be on April 20.

At Cwm Erfin Mine meeting, on April 7, the directors declared a dividend of 216*l.* 12s. (5s. per share), payable on and after that day.

At Marke Valley Mine meeting, on Wednesday (Mr. B. Warburton in the chair), the accounts for the three months showed a credit balance of 2656*l.* 7s. 4d. The profit on the three months' working was 2110*l.* 19s. A dividend of 1800*l.* (4s. per share) was declared, and the balance carried to credit of next account. Capt. John Truscott reported that the mine continued to yield large quantities of ore, but the low price of copper seriously affects their profits.

At the Great Laxey Mine meeting, on Wednesday (Mr. G. W. Dumbell in the chair), a satisfactory report was present, showing that the productive character of the property is fully maintained. Details in another column.

At the Great North Laxey Mine meeting, on Tuesday (Mr. Buller in the chair), it was decided to convene a special meeting for the purpose of raising additional capital. Details in another column.

At North Roskear Mine meeting, on April 7 (Mr. W. Nicholson in the chair), the accounts showed a debit balance of 385*l.* 2s. 9d. Messrs. R. Mackay, W. Nicholson, and J. Bradley were appointed the committee of management. The report stated that, looking at the indications in the 240 fathom level, west of Doctor's shaft, the agents consider that at no period since they have been connected with the mine have the prospects looked so encouraging as at present.

At Wheal Ida Mine meeting, on Monday (Dr. W. Knighton in the chair), the accounts for the three months ending February showed a credit balance of 73*l.* 9s. 5d. A call of 1s. per share was made. Capt. W. Taylor reported that the lode cut about a fortnight since is the most regular and well defined in the mine, and from its appearance he thinks it will improve soon. The next three or four months will, he hopes, show something good. Every economy is used to keep the working cost as low as possible.

At West Wheal Tremayne general meeting, on Wednesday (Mr. W. S. Sutton in the chair), the accounts for the four months ending February showed a cash balance of 57*l.* 2s. 5d., and liabilities over assets of 73*l.* 12s. 6d. A call of 2s. per share was made. The agent reported that the 20, west of Sutton's shaft, was daily expected to intersect the Wheal Jewell caunter lode, from which great results were confidently anticipated. The cost of the mine had been considerably reduced, and any discovery now would materially enhance the value of the mine.

At Wheal Buller meeting, on April 8 (Mr. H. Milford in the chair), the accounts for the four months ending February showed a debit balance of 145*l.* 14s. 11d. A call of 2*l.* per share was made. Captain James Inch reported that there are 40 men working on tribute, at an average of 10s. in 1l., at a stand-

ard of 60*l.* per ton for tin. Having made a considerable reduction in their working expenses, both underground and at surface, their loss will be very much reduced for the ensuing four months.

At Great Caradon Mine meeting, on Monday (Dr. W. Knighton in the chair), the accounts for the three months ending February showed a credit balance of 94*l.* 6s. 3d. A call of 2s. per share was made. Capt. W. Taylor reported upon the various points of operation.

At West Rose Down Mine meeting, on Wednesday (Mr. R. W. Childs in the chair). the accounts for the three months ending February showed a debit balance of 16*l.* 18s. 3d. A call of 12s. 6d. per share was made. Capt. J. Truscott reported upon the various points of operation. Every effort is being made to reach the lodes in the different cross-cuts as early as possible, and from the appearances in the adjoining mine at this depth they hope to find them productive.

At Carn Camborne meeting, on Wednesday (Mr. A. Cockett in the chair), the accounts for the three months to date showed a debit balance of 73*l.* 14s. 4d., and a balance of assets over liabilities of 287*l.* 2s. 2d. It was resolved that Capt. Truscott be empowered to negociate for the purchase of machinery, &c., necessary for stamping and dressing the tinstuff.

At the Gwydyr Park Mine meeting, on Wednesday (Mr. W. S. Sutton in the chair), it was agreed to convene a meeting for the purpose of taking steps for registering the company in 12,000 shares with limited liability. Details in another column.

COAL MARKET.—The expected fleet of sailing ships arriving this week rendered some concession of prices necessary to induce purchases. House coals were reduced 6d. to 9d. per ton, and a large business resulted. Hetton Wallsend, 18s. 3d.; South Hetton Wallsend, 17s. 6d.; Haswell Wallsend, 17s. 6d.; Lambton Wallsend, 17s. 6d.; Elliot's Wallsend, 17s.; Braddyll's Wallsend, 16s. 6d.; Eden Main, 16s.; Russell's Hetton Wallsend, 16s.; Pittington Wallsend, 15s. 6d.; West Hartley, 15s. Unsold, 23 cargoes: 15 ships at sea. Friday being Good Friday no market was held.

The Bank of England returns for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT a decrease in the "notes issued" of 290,385, which is represented by a corresponding decrease in the coin and bullion on the other side of the account. In the BANKING DEPARTMENT there is shown a decrease in the "public deposits" of 1,032,868*l.*; and an increase in the "other deposits" of 710,568*l.*; in the "seven day and other bills" of 53,512*l.*, and in the "rest" of 8534*l.*: together, 772,614*l.*=260,254*l.*, and adding thereto 447,630*l.*, the increase in the "other securities" on the asset side of the account, there is a total decrease in the reserve of 707,884*l.*

The Deutschland, from New York, has brought over about 1700*l.* worth of bar silver, being a further remittance from the Eberhardt Mine.

WHEAL AGAR.—Since the meeting of shareholders (reported in last week's journal), the lode in the 140, east of cross-course, has been cut into, and found as rich as the western end; and as the 130 continues to improve, the mine is gradually becoming a successful rival to its rich neighbours, East Pool, Tincroft, Dolcoath, and Cook's Kitchen.

TANKERVILLE.—The first sale of ore under the present company has just been made, the quantity being 100 tons, which realised 12*l.* 14s. 6d. per ton. This must be considered very satisfactory, as the company only took possession of the property about five weeks since. This sale is altogether independent of the ore then at surface, which has also been sold lately. Some of the new machinery is expected to be at work in six or seven weeks hence, when the returns are expected to be 150 tons per month, from which time the production will gradually increase. It is calculated that 100 tons yields a net profit of 600*l.* or 700*l.* By the latest advices the mine continues to open out in a most encouraging manner.

In Chancery.

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867, AND IN THE MATTER OF THE IMPERIAL SILVER QUARRIES COMPANY (LIMITED).

THE CREDITORS of the ABOVE-NAMED COMPANY are required, as to those within the jurisdiction of the Court on or before the 11th day of April, 1870, and as to those out of the jurisdiction on or before the 31st day of May, 1870, to SEND THEIR NAMES AND ADDRESSES, and the PARTICULARS OF THEIR DEBTS OR CLAIMS, and the names and addresses of their solicitors, if any, to Mr. GEORGE HERBERT ELYARD BROWN, of No. 2, Copthall-buildings, in the City of London, the Official Liquidator of the said company, and, if so required by notice in writing from the said Official Liquidator, are, by their solicitors, to COME IN AND PROVE THEIR SAID DEBTS OR CLAIMS, at the chambers of the Vice-Chancellor, Sir RICHARD MALINS, No. 3, Stone-buildings, Lincoln's Inn, in the county of Middlesex, at such time as shall be specified in such notice, or, in default thereof, they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such debts are proved.

Thursday, the 14th day of April, 1870, at Twelve o'clock at noon, at the said Chambers, is appointed for hearing and adjudicating upon the debts and claims of such of the creditors as are within the jurisdiction of the Court, and Saturday, the 4th day of June, 1870, at Twelve o'clock at noon, at the said chambers, is appointed for hearing and adjudicating upon the debts and claims of such of the creditors as are out of the jurisdiction.

H. PRICHARD, Chief Clerk.
GEORGE ANNESLEY, 64, Lincoln's Inn-fields, London (Solicitor to the Official Liquidator).

Dated this 25th day of March, 1870.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
April 8	Minera Union	11	£12 15 6	Walker, Parker, & Co.
9	Frank Mills	87	13 14 0	R. Michell and Son.
—	ditto	31	12 7 6	ditto
—	ditto	34	8 15 6	ditto
—	Llanerchyraur	60	13 10 6	Panther Company.
11	Glogfawr	60	13 14 0	ditto
—	Frongoch	70	12 6 0	ditto
—	ditto	70	12 7 6	ditto
—	Graig-goch	28	12 5 0	ditto
—	East Darren	80	16 7 0	ditto
—	Goginan	32	16 12 6	Weston & Collingborn.
—	Cwm Erfin	20	15 15 6	Stock and Co.
—	ditto	20	16 8 0	Walker, Parker, & Co.
14	Talargoch	26	13 8 6	ditto
—	ditto	121	14 6 6	ditto
—	Treiogan	50	13 14 6	Adam Eyton.
—	Holywell Level	20	12 12 0	Walker, Parker, & Co.
—	Mold Mines	43	12 9 0	Adam Eyton.
—	Deep Level	19	13 0 6	ditto
—	Gladstone	15	13 11 6	ditto
—	Wagstaff	20	11 12 6	Walker, Parker, & Co.
—	ditto	4	6 0 0	ditto
—	Parry's	7	12 18 6	ditto
—	North Henbias	6	11 2 6	ditto
—	ditto	2	4 10 0	Adam Eyton.
—	Brynford Hall	7	11 10 6	Walker, Parker, & Co.
—	North Hendre	10	13 10 0	Adam Eyton.
—	ditto	5	15 0 6	ditto
—	South Pantyne	8½	12 4 6	Walker, Parker, & Co.
—	Cwmbyr	30	12 1 0	ditto
—	True Blue	6	12 1 6	ditto
—	ditto	3½	15 1 0	ditto
—	Dyliffe	35	12 8 6	ditto
—	Glan Alun	15	12 12 0	ditto

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
April 9	Minera Union	4¼	£ 3 10 0	Kenrick and Son.
13	Talargoch	180	3 5 6	Bagillt Company.

BLACK TIN.

Date.	Mine.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchasers.
April 7	Penhalls	8 16 2 0	£77 10 0	£683 18 9	—

COPPER ORES.

NO SALE on Thursday last, April 14.

Copper ores for sale at the Royal Hotel, Truro, on Thursday next—Mines and Parcels.—Devon Great Consols 1277—Marke Valley 493—Okel Tor 250—East Caradon 233—Gawton Copper Mine 203—Bedford United 116—Gonamena 107—Prince of Wales 94—Wheal Russell 62—Devon and Cornwall 45—East Gunnislake, &c., 34.—Total, 2919 tons.

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday week—Mines and Parcels.—South Caradon 567—Glasgow Caradon 270—West Damsel 146—Dampfylde 106—Great North Downs 25.—Total, 1114 tons.

Notices to Correspondents.

IMPROVED CALCINER.—In your next column of Notices to Correspondents, I shall feel obliged if you will refer me to a description of Oxland and Hocking's calciner; a paragraph concerning which occurs in the Journal of April 9.—SUBSCRIBER: *Holywell, April* 11.—[We are obliged for "Subscriber's" communication. The description will be found in the Supplement accompanying this day's Journal.]

CROWLWM.—This lead mine was working a few years ago a little to the west of Bryntail, near Llanidloes. Will some one kindly inform the writer, who was a shareholder in it, whether the mine is working now; and, if so, under what name, and with what prospects?—CAUTION.

THE METALLURGICAL INDUSTRY OF CLEVELAND.—We have been requested to state that the very interesting article upon this subject in the current number of the "Quarterly Journal of Science" (and of which a full abstract was inserted in the Supplement to last week's Journal) was written by Mr. John Mayer, F.C.S., of Glasgow. By a clerical error the author's name was omitted in connection with the paper, and the article was, consequently, attributed to the Editor.

INTERNAL TEMPERATURE OF THE EARTH—"H. R. F."—Mr. Hull, F.R.S., embodied an account of all the recent researches in connection with this subject in a paper which he read before the Royal Society, and a full abstract of which was published in the Journal of Feb. 25; it is, therefore, unnecessary to make further reference to it.

IRON TRADE—"C. W." (Newcastle-on-Tyne).—Rose's Guide to the Iron Trade (which consisted of tables of weights of the metal, &c.) has not been reprinted. There is no such directory as you mention, but Messrs. Kelly (of the Post Office London Directory) have one, we think, in preparation.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, APRIL 16, 1870.

THE MINING DISASTER NEAR TO EDINBURGH.

Half a hundred miners were in terrible jeopardy last Saturday in Scotland. The particulars of the accident are set forth in the letter of our Glasgow Correspondent. Briefly recapitulated, they are that near to Bathgate, a town lying between Glasgow and Edinburgh, shale is being worked at what is known as the Starlaw Pit. There is but one shaft, and this, at 40 fms., reaches the seam, which is upon the slope; and workings run out upwards and downwards 200 fms. in one and 100 fms. in the other direction. By the aid of a furnace the one shaft is made to ventilate the workings by stout timber bratticing in the middle, which separates it into a down and upcast. The furnace stands at about 30 ft. from the foot of the upcast, with which it communicates by a flue 3½ feet in height. The timber bratticing was not the only inflammable material in the shaft, for excepting 20 feet at the bottom, where there is a firm stratum, the shaft had a timber lining. Shortly before noon on Saturday, when 53 men and boys were down, it was discovered that the soot on the wooden lining of the upcast had taken fire. Such a thing had happened three months before, and the timely application of a little water stopped all mischief. A similar remedy, it was thought, would be effectual now, and two workmen ascended the shaft, and obtaining water, threw it upon the lining, and believed that all was again safe. Ten minutes had hardly elapsed when the wood was found ablaze. An alarm was sounded through the workings, and the men hastened to the shaft. Here they would have had but little chance of escape, if the engine-driver had not been at once a thorough workman and a true man. Let his name receive all the publicity the *Mining Journal* can give it. JAMES STEEL should henceforth take his place upon the long list of mining heroes. Very many years may it be before his name has to be placed upon the dead-roll. Directly he saw what had happened he went to the gearing, like a helmsman of a burning ship, who, seeing land, determines to stand to his post, and, if necessary, sacrifice his own life in the heroic resolve that the living freight of the craft he steers shall be landed in safety. Down went the cage, and back it came again, landing eight or nine men all within a minute. The flames blazed from the upcast, and he in his engine-house was almost as in a furnace of fire and smoke, but he flinched not. Down and up, and down and up, and still down and up went the cage, its woodwork burning, and its iron work at a great heat, everytime for some five or six minutes landing as many men as could crowd themselves into it. Presently the hempen rope by which the cage was suspended began to fire, and fears were entertained that no more lives could be saved, but that the skip in the downcast must share the fate of that let down the upcast, and drop off by the action of the fire upon the rope. Happily enough, tensile strength remained for further descents. The fire got into the downcast, and cut off all ventilation, the risk of the men who yet remained below became fearfully imminent. The skip came up without occupants. Next time it brought up and took down the two men who were in it, for the lookout of the people on the bank was impaired by the smoke and flames round the pit top, and they had shouted to STEEL that the skip was again empty. At the following ascent the two men were liberated, bruised and burnt. Three fruitless descents were made by the skip, but at the fourth another two men, who had crawled to the bottom, got into it. They had tried to bring up a third, but his strength failed, and he dropped off. These men were without their coats, were sadly burnt about their arms and shoulders, and one of them broke his leg in getting out of the cage. One or two more descents were made, but the skip returned empty. The next time the burning rope severed, and all hope of recovering the seven men who were known to be still in the pit was at an end. After burning seven hours the fire was put out, a winding apparatus was extemporised, a service funnel erected, a mid-wall of canvas hung up in the shaft, and before midnight the bodies of the seven deceased were recovered. They had died chiefly of suffocation.

This accident will go far to assist in placing shale pits under Government inspection. An equal number of men might have been at one time in equal jeopardy in certain of our coal mines, but in coal mines so much risk, owing to there being but one outlet, is no longer possible. After the Hartley calamity, in January, 1862, the Government, it will be remembered, made two shafts a necessity, where more than a dozen men were employed, after the expiration of a certain date. That date has run out. The larger number of shafts has led to an increase in shaft accidents, but the alteration has brought about economy of life in other directions. The wisdom of the change is illustrated by this accident; yet we see it reported from Scotland by Mr. MOORE, who is Her Majesty's Inspector for the Eastern District, and writes on the last day of 1867, that "there is considerable difficulty in obtaining compliance with the Double Shaft Act, although instances are so frequently occurring which show the wisdom of that enactment. The most common attempts at evasion are in small fields, where a pit works 30 or 40 acres of coal; the pits are planted from 300 to 400 yards apart, and when they reach the coal and are opened up, ordinary workings are carried on in all directions, as well as the means of communication, and in some instances the pits would have been communicated and the fields exhausted at the same time." Such shafts are very different to those which are known to have cost, as at two or three collieries in the North of England, not less than from 100,000*l.* to 150,000*l.* each. An ordinary shaft in not unusual ground may be made complete down to 50 fms. for from 5000*l.* to 10,000*l.* When we talk of complete, neither ourselves nor Mr. WARINGTON SMYTH, whose figures we quote, speak of timber lining, and not brick or stone. Doubtless, wonderfully good mining has been done in the Northern coal field with a single shaft, but such a condition of things can hardly be looked for under the conditions which characterised the shaft at the Starlaw shale pit. That shaft, we presume, was no exception to the rule affecting the shafts in Scotland generally. Whilst in England the shafts are circular, and in Wales elliptical; in Scotland they are nearly all rectangular, varying from 10 ft. in length by 5 ft. in breadth, to 18 ft. in length by 6 ft. in breadth; and when it is necessary to line them they are lined with wood. They are also divided into compartments by wooden mid-walls; "but," writes Mr. RALPH MOORE in the report from which we have just quoted, "the heat in the upcast shafts which is now necessary to be maintained where the furnace is the ventilating agent, shows that it will be necessary to adopt brickwork in the upcast compartments. For the last 25 years it has been the custom in some of the collieries in East Lothian to have the mid-wall next the upcast of brickwork, and also to line the sides of the upcast compartment with brick instead of wood."

East Lothian is, undoubtedly, in advance of Mid Lothian. A needs-be for brick instead of timber alike in the construction of the mid-wall and of the upcast compartment has, doubtless, brought about the change. Amongst the accidents of a class similar to that upon which we have now been dwelling—but, happily, unattended with fatal issues, because the colliery possessed a second outlet, by which the men escaped in safety—was a fire which occurred sometime ago at the Greenfield Colliery, near Hamilton, in Scotland. In consequence of the heat of the ventilating furnace at the bottom of the upcast shaft the timber mid-wall and the wooden lining of the shaft ignited, and before the fire could be extinguished the woodwork of the shaft was destroyed, and much damage done. Since that time the timber mid-wall has been replaced by one of brickwork, and the strata, where it required lining in the upcast compartment, has also been lined with brickwork. The result is that the furnace, which has two fire-grates, each 6 ft. wide, can now be raised to any heat with impunity, and 60,000 cubic feet is usual in the upcast, which has an area of 50 square feet. Hardly anything more than this need be said in advocacy alike of the disuse of timber as mid-wall and lining in Scotland, where the use of timber for such purposes stands almost alone in the coal mining of Great Britain.

GOVERNMENT INSPECTION OF MINES.—The Mines Regulation Bill will be committed on April 25, for the purpose of inserting amendments, and Mr. BRUCE hopes that afterwards the Bill may be passed through committee in a single day. The Lords and the Commons' Bills will be fused. In metalliferous mines, ventilation and convenient "drys" must be provided. The clause extending the Workshops Regulation Act to all mines will, no doubt, be retained.

TRADES UNIONS.—The intimation given on Monday night last by Mr. Home Secretary BRUCE to the effect that probably he will introduce a Bill during the present session in reference to Trades Unions will, doubtless, be received with much satisfaction by the great manufacturing and trading interests of the country. Freely according to the working classes the right to combine together for the purpose of protecting their own rights, and even to regulate the wages for which they shall work, yet it cannot be denied that the law as it at present stands is inoperative to a great extent in checking those outrages which are still constantly occurring, and which have such a prejudicial effect upon manufacture and trade generally. The *Times*, some six or eight months ago, aptly illustrated the effect of Trades Unions in this country with regard to the Iron Trade, causing us to take a subordinate instead of the leading position in this branch of production. It showed clearly that the continental manufacturers of rails were able to secure the great bulk of the rails required for the important lines being carried out on the Continent, and that the orders received by English firms were nothing more than the overflow from the continental manufacturers. This is due to the fact that the English manufacturer is to a great extent paralysed by the organised and constant demands of labour, and the control under which he suffers as to the employment of his capital. The remarks made by the *Times* some months since apply with equal force to the present moment, but little advance has been made towards a just perception of the principles which should regulate the terms between employer and employed. The National Association for the Promotion of Social Science has indeed been considering the whole question of Trades Unions, and the executive committee of such association has drawn up a series of resolutions which they conceive the Legislature should adopt in reference to this important subject. These resolutions, however, embody little that is new, or what has not long since been conceded by all thinking minds. There is, however, one resolution which, if it receives parliamentary sanction, may tend to check trade outrages; it is to the effect that whenever it can be shown to the satisfaction of a jury that any one has been wronged in either his person, earnings, or property, through the instrumentality of Trades Unions, then the funds of such association shall be liable for indemnification. Such would be a step in the right direction, but we believe that the best means to prevent trade outrages would be, on the one hand, of proving to the working classes that their interests, are identical with those of their employers, and on the other hand providing sharp and certain punishment to those who disregard all interests, and refuse to be bound by those duties and relationships which should guide all classes. We think the great manufacturing and trading community of the country may safely leave this subject in the hands of the present Home Secretary, satisfied that his former intimate connection with these interests peculiarly adapts him to legislate upon such an important question.

RUSSIAN RAILWAYS.—A great iron bridge at Kymmene, on the St. Petersburg and Richimaki Railway, has been supplied by MM. Tiden, Nordenfeldt, and Co., having been constructed in England. The work of Russian railway construction is being pushed on apace, and it would seem that the guarantees given by the Russian Treasury upon the lines constructed have thus far not involved any serious burden to the Russian Government. We may, then, conclude that the process of construction will not slacken, but will continue on a considerable scale. This is obviously a matter of great importance to the British iron trade, which has sent such great quantities of rails to Russia during the last two years. The Moscow and Jaroslaw line has been recently completed, and the Charkow and Krementchug is also nearly finished. Another great project, the Kiew and Brest, has lately been launched by the Russian Committee of Ministers; the line will be constructed partially with a double set of rails.

SIEMENS'S STEEL.—Among the articles exhibited at Sir Edward Sabine's Conversazione were Mr. C. W. Siemens's specimens of steel, which have not yet had the notice they so well deserve; they represented the metal in various forms and conditions, and in different stages of manufacture. The process by which this steel is produced may be briefly stated thus:—Good hæmatite ore and spathic ore are mixed and treated with carbonaceous materials, by which their total or partial reduction into metallic iron is effected. This metallic iron is then subjected to very intense heat on the open hearth of a Siemens regenerative gas furnace, and in certain given quantities, or series of instalments, is dropped into a bath of cast-iron previously prepared in the furnace. This operation is continued until the requisite degree of decarbonisation is arrived at; and manganese is added in the form of ore or of spiegeleisen. The quantity of molten metal thus produced in one charge is about four tons; it is tipped into a ladle, and poured into iron moulds in the usual way, and forms steel of the highest quality. To those acquainted with ordinary way of making steel the superiority of this process will be manifest, while as regards cost it effects a great saving. One ton of steel ingots may be produced with a ton and a half of cheap small coal. The ordinary Sheffield process requires from 5 to 6 tons of fuel for 1 ton of steel. The new process is now actively carried on at the Landore Siemens Steel Company's Works, near Swansea.

THE WIRE TRAMWAY.

The fact of a dozen lines of various lengths, up to three miles, being in practical everyday use as an ordinary means of transport, is, perhaps, the most satisfactory evidence that could be afforded that the wire tramway system is of commercial value; yet, to afford those interested in the subject facilities for inspecting the system in actual operation, arrangements have been made for the working of a line on the Brighton Downs daily during the ensuing month, and on Wednesday a number of engineers, and others, thoroughly examined, at the invitation of Mr. Beale, the agent to the patentee, the entire line. Commencing near the gas works at Black Rock, the line is carried over the race-course, across the valley beyond, and after pursuing a very varied course, brought back to a point within ¼ mile to the eastward of the starting-place.

Such difficulties as those which have been intentionally created in connection with the Brighton line (which is an exhibition line, five miles in length, constructed of part of the plant for a proposed 60-mile line in Ceylon) are not at all likely to occur in practice; but as the object in view was to show the facility with which rope railways could be applied in carrying produce in difficult countries, the construction of an ordinary line would, of course, have been useless. In two places the line turns at right angles, and the alternations of hill and dale and inconvenient curves is certainly as trying to the system as could be desired. The line is carried upon 123 posts, and the rope, which is made of charcoal iron, is 2 inches in circumference. In some places the gradients are as steep as 1 in 8, and the greatest of the spans upwards of 220 yards. The whole of the work appears to be done in the best possible manner, and a speed of about five miles an hour is attained with a 16-horse engine with great facility. The model line is equal to 120 tons per day, of 10 hours, in each direction, and is really one complete section of the Ceylon line, which it is proposed to work in five-mile sections, two of which will be worked by one engine.

The mode of working the wire tramway system was fully described in the *Mining Journal* at the time of its introduction, about 12 months since, but it may be well to repeat that the line consists of an endless wire-rope, supported on a series of pulleys, carried by substantial posts, which are ordinarily about 300 feet apart, although where necessary much longer spans can be taken, as much as 1000 ft. being, where necessary, satisfactorily dealt with. The rope passes at one end of the line round a clip-drum, driven by a steam-engine or other available power, at a speed of from four to eight miles an hour. The boxes carrying the load are hung on the rope by a peculiarly-shaped pendant, which maintains the load in perfect equilibrium, and at the same time enables it to pass the supporting pulleys with ease. No difficulty is experienced in delivering from 150 to 200 boxes, of from 1 cwt. to 10 cwts. each, in an hour, and, of course, the loading and discharging arrangements can readily be varied to suit the particular purposes for which the line may be required.

At each end and at the angles a special arrangement is made, consisting of rails placed to receive the small wheels with which the boxes are provided, and deliver them from the rope. The boxes thus become suspended from a fixed rail instead of the moving rope, and can be run to any point to which the rail is carried for loading or delivering, and again run on to the rope for returning. Curves, whether sharp or otherwise, can be passed with the greatest facility, and gradients so steep as 1 in 6 do not prevent the satisfactory working of the line, whilst the rope never being required to stop, renders the operation of transport over the line particularly simple. The applicability of the wire tramway system in mountainous or hilly districts will be obvious, as its cost of construction increases but little under such circumstances, whilst that of a road or railroad is, perhaps, increased tenfold, and its daily working cost doubled or trebled: the rope being continuous, no power is lost on undulating ground, as the descending loads help those ascending.

In its application to such purposes as the transport of ores from mines to railways, and of materials in the contrary direction, the landing or shipping of goods in harbours and roadsteads, the peculiar features of the system render it specially advantageous, especial importance being attached to the facility with which power can be transmitted by the rope and taken off at any required point, for mining or other purposes. Lines have already been constructed, and are in successful operation at various places in France (where the system has been most extensively adopted), England, Ireland, and Hungary, and others are in course of construction for Spain, Sweden, Italy, South America, and elsewhere. For the Thames Gold Diggings, in New Zealand, two mineral lines, each two miles in length, are being prepared; the Pestarena Company have five miles nearly completed for their Valanzasca Mines; at Lima, in Peru, three lines, of six miles, four miles, and three-quarters of a mile respectively, are in course of construction; and the Spanish Government have ordered a 15-mile line for the Fabrica de Trubia. Of course the cost of working will vary much according to circumstances, but it is estimated that generally, with average conditions and 10-mile lengths, 50 tons per day may be carried, at 2¼d. per ton per mile; 100 tons, at 1¾d. per ton per mile; 200 tons, at 1¼d. per ton per mile; and large quantities at 1d. per ton per mile, the estimate including every item of engine-power, labour, and attendance, repairs, replacement of rope, lubrication, and interest on capital.

Comparing the Brighton line with that put to work in Leicestershire, upon the first introduction of the system, one cannot but be struck with the improvement which results from the use of iron instead of wood supports; yet, from the very trifling modifications which Mr. Hodgson's experience gives him in erecting some 30 miles of the way, it is apparent that the invention was closely approaching completeness when brought forward. The facility with which the endless rope, though ten miles long, kept taut is all that could be desired, and the importance of this must not be underrated, since it must be remembered that considerable sag of the rope materially increases the gradients up which the loads have to be drawn. Of course, the loads being pretty equally distributed along the line would to some extent balance each other, as it would seldom happen that more than two buckets are between any two supports at the same time; yet, in the case of a long incline, tautness is most desirable. In connection with the question of the balancing of the loads, Mr. Hodgson has obtained a very satisfactory proof. It was not unnatural to expect that in the event of the breakage of the rope the whole system would be deranged, by the rope being thrown out of the pulleys, and the whole of the loads being dropped; indeed, some have mentioned this as an objection to the system. In practice no such inconvenience arises, as was evident from an accidental breakage of a rope during the preliminary testing of one of the lines which had been erected. The breakage took place whilst the loads were travelling, and, of course, the two buckets next the fracture came down inconveniently heavy; the two between the next pair of supports in each direction likewise upset the loads by the force of the fall; the next two pairs appeared to have been eased down to the ground, and a pair or two further the damage altogether ceased, the loads being held fully suspended, owing to the tightness with which the rope was gripped by the riding blocks, which form part of the pendants.

The danger of the breakage of the rope is, however, extremely small, since from the low speed, averaging 5 to 6 miles an hour, at which the rope runs it is unlikely that an ordinarily attentive engineer would fail to observe the fracture of a strand in time to prevent the failure of the rope. But even assuming a breakage, the stoppage would scarcely exceed the time necessary for reaching the place of the accident—in fact, merely the time necessary to make the splice.

The longest sections which Mr. Hodgson propose to employ under ordinary circumstances is five miles, but does not think it improbable that when he has obtained a little more experience he may be

enabled satisfactorily to deal with such an exceptional case as that of the Quebrada Mining Company's property. There the ore must be brought 30 miles, but the difficulty is that 15 miles must be worked with one engine, the country between being so extremely unhealthy that Europeans could not live there, though the natives do well enough; there would, consequently, be no difficulty in getting the line looked after, though they could not have an engineer. He had an idea of working this by four sections, the power being transmitted by the ropes from one section to the other—the rope on the section nearest the engine being, of course, the largest, and each of the succeeding sections smaller. He had not yet tested this, but had thought of it as a mode of overcoming the difficulty.

STEEL-TEMPERING SUPERSEDED.

The merits of Mushet's "Special" Steel, manufactured by the Titanic Steel and Iron Company, of Coleford, Gloucestershire, have been already noticed in the *Mining Journal*; it is satisfactory to learn that its use is rapidly extending. One of the chief peculiarities of the steel is that a light cold-hammering suffices to harden it perfectly. At a low red heat the steel can be forged without great difficulty, all that is necessary being that the bar is not drawn down too much without re-heating. When a tool has been brought to the required shape, and lightly but thoroughly cold-hammered, it should be put aside, to cool gradually. When cold it only requires grinding to be fit for use. Messrs. John Fowler and Co., of Leeds, are now using the "special" steel very extensively, the steel forgings and castings largely employed in the construction of their engines making the quality of the tool steel used a matter of considerable importance. The taking of a slight cut, scarcely more than skin-deep, off the inner faces of the deep flanges of the steel winding-drums, and the series of intermittent cuts which have to be taken in turning up the faces left on the arms of these drums, &c., are pieces of work which test the quality of tools as much as it is, perhaps, possible to test it, many of the castings, notwithstanding the annealing to which they are subjected, having skins so hard, more particularly in the angles, that it is with difficulty a tool can be got to act upon them at all. It is for this class of work that Messrs. Fowler are now using Mr. Mushet's steel, and they are gradually replacing all their lathe and planing machine tools with this material. At a planing machine with these tools in use planing locomotive coupling rods (iron), about 7 ft. long, between centres, the average work done by each tool without grinding being to take a finishing cut over all sides of one rod, and a similar roughing cut over the next, while at an adjacent machine was a tool which had been in use planing for 17 hours without requiring to be taken to the grindstone. Similarly tools had been planing cast-iron 15 hours, and turning steel axles 6 hours, the surface speed of the axle being 20 ft. per minute, while one tool had been planing steel horn-blocks 25 hours. Perhaps, however, the best evidence of the value of this material is to be found in the behavour of the machine men at the Steam Plough Works, who are all on piecework, and who, when turning or planing steel, invariably use the tools of which we have been speaking if they can possibly get them, as they enable them to run their machines at a higher speed, and avoid loss of time in grinding and making changes. So far we have only spoken of the value of the material when used for operating on steel, but the same qualities which give it value in this case render it equally valuable for turning or planing wrought or cast-iron.

GENERATION OF STEAM POWER BY GAS.

The economy of steam-power, as compared with every other motor that has been proposed, is universally acknowledged, but there are frequently local circumstances which render its application altogether impracticable. As an instance of this, the case of the East and West India Dock warehouses may be referred to. In the company's Crutchedfriars warehouses, wherein enormous quantities of tea are stored, the use of steam generated by coal is strictly prohibited, and the consequence has been that hitherto the whole of the work has been performed by manual labour—the warehouses, which consist of five floors, in addition to that upon which the chests are received from the vans, having been worked by the old system of staging, which necessitated, for lifting the chests from the ground to the top floor, the employment of no less than 36 hands. The company have now adopted Mr. JACKSON'S patent, to which reference has frequently been made in the *Mining Journal*, and the result is that one man, who attends to both boiler and lift, performs the whole of the work.

The boiler, which is of 2-horse power, and occupies a space only 3 ft. square, is heated entirely by gas, the steam rising between 6 and 7 lbs. per minute, and affording an abundance of power for the steam crane, which has a cylinder 6 in. diameter and 10-in. stroke, working a cage 7 ft. 1 in. by 5 ft. 6 in., and capable of holding upwards of 20 full-sized chests of tea. The cage, however, is seldom loaded in this manner, it being found that greater expedition and economy of labour result from running the chests direct into the cage, on the ground floor, without removing them from the trucks on which they are taken out of the vans. The cage and trucks are raised to the floor required, and forthwith wheeled to their allotted bed, so that the chance of damage is reduced to the minimum. Judging from the numerous testimonials which have been received in favour of this system satisfaction has in every case been given, although it has been applied to very various purposes, from the working of a crane to the driving of printing machines.

In addition to the economy of the gas-generated steam, and the very limited space occupied by the boiler, the invention has the advantage of being extremely cleanly, and of involving no additional insurance premium; indeed, accident with the gas-boiler is scarcely possible, since the gas-burners whence the heat is derived are, of course, incapable of removal from beneath the boiler, whilst the boiler itself, being a vertical multitubular, is entirely free from danger, and as they are exclusively manufactured by Mr. Middleton, of Loman-street, Southwark, no doubt need be entertained as to their quality. The system requires no stoker, brickwork, chimney, fire-bars, nor smoke-consuming apparatus, whilst with regard to efficiency, safety, and cleanliness it is without equal. The cost of gas for cranes of this size while at work is found to be about 6d. per hour. Wherever an ordinary gas supply exists the gas-boiler can be satisfactorily employed, and where the use of steam-power is required only occasionally gas-generated steam would be economical, whilst that generated in the ordinary manner would be altogether inapplicable.

GAS MAKING.—Some improvements in connection with the manufacture of gas, has been proposed by Mr. P. R. HODGE, of Adam-street, Adelphi; they relate first to taking the gas as generated by any of the established processes of generating gas from hydrocarbonaceous fluids, and combining it with another dose of atmospheric air or pure oxygen gas, and in using a compound jet to commingle or combine these gases together, for the purpose of illuminating or heating. Second, instead of supplying atmospheric air by mechanical means, as was proposed by Messrs. Hengst and Watson, some two years since, Mr. Hodge supplies atmospheric air by means of an inflated air chamber worked under pressure, for the purpose of aërating the hydrocarbonaceous fluid. The chamber may be made in the form of an ordinary gasholder, or in the form of a bag or bellows, constructed with flexible sides, the top and partitions running in guide rods, such receiver to be supplied with atmospheric air by an air-pump or bellows.——For Purifying Gas, Mr. S. J. WOODHOUSE, of Leeds, proposes to use an apparatus, which consists of an external case made of brass or other suitable material, and is attached to the meter by means of a pipe and a union joint. Inside this outer case is a movable cylinder closed at the top, but open at the bottom. The circumference or side of this cylinder is perforated with longitudinal apertures, wider in the middle and diminishing to the two points.

WHITE LEAD MANUFACTURE.—An improved method of manufacturing white lead ("carbonate of lead") by the action of the soluble acid carbonates of the alkalies on litharge, hydrated oxides of lead, or insoluble basic salts of lead, has been patented by Messrs. DALE and MILNER, of Warrington. The inventors propose to mix litharge, hydrated oxides of lead, or insoluble basic salts of lead, with an equivalent of bicarbonate of soda, together with sufficient water to form a stiffish paste. This mixture is ground in a suitable mill, small quantities of water being from time to time added as may be found requisite, until the change of the lead bodies into carbonates is complete. The paste is now well washed with water, and the supernatant liquid which contains the carbonate of soda is separated from the white lead by filtration, and boiled down to dryness and disposed of as soda ash; or it may be crystallised, or may be again converted into bi-carbonate of soda by treatment with carbonic acid, and used to convert further quantities of lead oxides or insoluble basic salts of lead into carbonates.

REPORT FROM SCOTLAND.

April 13.—The operations in the Pig-Iron market during the few business days which have elapsed since last report have been characterised by strength and vigour, heavy sales having taken place, and a considerable transference of warrants. The advance in prices on 'Change has been followed close by makers, whose quotations have been advanced in correspondence with those now current. On Monday the business done brought up rates to 56s. 10½d. cash, and 57s. 1½d. a month; and yesterday, in the forenoon, as much as 57s. 1d. cash was paid, and 57s. 4½d. a month, but the close was 3d. easier. To-day the market was very vigorous, and a good business was done at 56s. 10½d. to 57s. cash, and 57s. 1½d. to 57s. 3d. a month, closing sellers over. No. 1, g.m.b, 56s. 9d.; No. 3, 55s. 3d. Makers' iron—No. 1 brand, Coltness, 64s. 6d.; Gartsherrie, 64s.; Langloan, 60s.; Shotts, 60s.; Eglinton brands, 57s. The large consumption and shipments, aided by speculative influences, is the chief cause of the advance in pig-iron, and speculators are said to be aiming at 62s. 6d. before they leave off. This point will not be gained unless operators are efficiently aided by a continuation of the present heavy shipments, in which case they may gain their object. The shipments for the week ending April 12 were again very large, being 17,390 tons, against 12,930 tons in the corresponding week last year. Manufacturers of merchant iron are beginning to feel rather easier in some instances, and we know of one Coatbridge firm who is scarcely able to keep things moving. Being at the end of the year without orders for forward delivery, they find it difficult to secure orders amongst their ordinary customers, who are reported to be still receiving finished iron from the makers at the prices current in November of last year. They are, therefore, quoting 5s. a ton under the list price—5s. per cent. off; and boiler-plates have fallen 10s. a ton from what they were quoted six weeks ago. If one or two more of the works would introduce rolls and other heavy machinery capable of turning out rails it would do the whole Scotch manufacturers good, as it would limit the production of bars to the extent to which they took up rails, as rails must come into increasing demand for rhe maintenance of permanent way or for new undertakings. The manufactured iron trade is, notwithstanding, in a thriving condition, new contracts having been taken in the Clyde for additional iron vessels during last week, although there may be one or two makers in the condition indicated. In the ironfounding trade there is greater quietness amongst pipe-makers, but we are glad to known that the Corporation of Glasgow are in the market for about 500 tons of water-pipes for the city and suburban service. Brass and copper workers are well employed, and the tube and tin trades in this neighbourhood are pretty fully engaged.

The Coal Trade is easier, on account of the spring shipments being about over, and the rates are again in favour of buyers. Indeed, there is a felt restriction in the sales, and a consequent drooping of prices. The shipments for the week, till yesterday, were 37,260 tons, against 27,905 tons in the same week of 1869.

A most unfortunate occurrence took place at Starlow Shale Pit, near Bathgate, on Saturday last, by which seven men were suffocated, and one man died from injuries received, and others have been seriously hurt. The catastrophe occurred through the "cube"—kept burning for the purpose of ventilating the mine—communicating its flame to the wooden lining which divided the upcast from the downcast shaft, by some as yet unexplained cause. There were 56 men and boys in the pit at the time, all of whom would, in all probability, have been saved had there been a double outlet. The pit was about 40 fathoms in depth, and being sunk upon the slope of the seam, the workings extended both upwards and downwards, reaching about 200 fathoms in one direction and 100 fathoms in the other. There being only a single shaft to the pit, those who escaped had to be drawn up through flames and smoke, the skin peeling off some of their bodies when grasped by their fellow-workers. The lamentations of the wives and friends of deceased were very distressing. The pit is the property of Messrs. E. Meldrum and Co.—a firm which includes Mr. Meldrum, of Dechmont; Mr. M'Lagan, of Pumpherston, M.P.; and Mr. George Simpson, Viewfield, parish of Shotts.

TRADE OF THE TYNE AND WEAR.

April 14.—On the whole, trade is quiet; this in the face of the greatest Iron Trade ever known appears to be rather paradoxical; but, however, this is really the fact, and general activity is still only looked for, although good progress has been made lately. The Coal Trade in Northumberland, now that the Baltic is opening, shows much more animation, but some time must elapse before general activity can be expected, especially as coalmasters are anxious to reduce the large heaps of coal which in numerous instances accumulated during the winter. During the past year, ending in April, the coal works in Northumberland have not, as a rule, averaged much more, if any more, than half-time—say, six or seven days per fortnight: this is, perhaps, a little too high to place it, yet there are exceptions, and in some cases an average of ten days per fortnight has been attained by the orders obtained, and also allowing stocks to accumulate considerably. In one case, where ten days per fortnight has been worked, and the men have earned on an average about 5s. 8d. per day, a notice has been sent in by those men demanding an advance of prices; this is hardly fair, as the wages paid to the men have been good. It is difficult to reconcile with any sense of reason or justice the constant and determined efforts of workmen in our mines for higher wages and shorter hours of labour. Capital is thus placed between two forces, constantly employed in attempts to effect its destruction—that is, competition on the one hand for the sale of coals and other products, on the other hand constant demands on the part of workmen for higher rates of rumuneration for their labour.

There are not many new winnings in progress in Northumberland, but there are some; one of the most remarkable is the new winning at East Holywell, where considerable progress has been made, a powerful engine having been erected, capable of lifting a large quantity of coal. The High Main seam is worked here, which produces good Wallsend coal of large size, and the coal is in great request in many quarters, both at home and abroad. A considerable quantity of it is used in the South of England, partly by the War Office, and a large quantity is also sent abroad, to Hamburg and other places. The Yard seam is also found here in great perfection, and at some points it is 3 ft. 6 in. in thickness. This seam produces a fine hard, compact coal, very useful for steam and other purposes. At Wylam, where the main old-established colliery was stopped some time ago, an upper seam has been opened by Mr. Dunn, which produces a very good hard steam coal, which is likely to be much used for locomotives on railways; it has, indeed, been introduced for this purpose on the North-Eastern Railway, and it answers the purpose most admirably. There is an upper seam, which has by the former workers of the colliery been neglected, and consequently the present lessee has the privilege of working a considerable quantity of whole coal; and he has this advantage also, that he can work this coal entirely free from water, the large feeders met with below having been allowed to accumulate for some time. The water thus formed has risen until it has reached the workings at Mickley, where a very powerful pumping engine has been got to work, which will prevent its rising any further in that direction, so as to obstruct the workings of that extensive colliery. The operations at Hebburn continue to be pushed forward rapidly, and the main seam has now been reached; therefore, it is expected that shortly coal will again be got from this well-known seam and old-established colliery. The winning at Boldon is rapidly approaching completion, and, as already noticed in this letter a very powerful winding-engine has been erected, and also got to work; it is, indeed, the largest winding-engine yet erected at any colliery in this district. A large quantity of coal is expected from this new winning shortly. At Silksworth considerable progress has been made, and a number of new boilers fitted up in the most modern style. As a great depth is to be sunk before reaching any of the known seams at this point, some considerable time must elapse before this great undertaking can be completed, especially as the formidable sand and the large feeders of water generally met with are to be passed through. This sand was, however, passed through in a manner comparatively very easy at the great adjoining colliery—Ryhope—and as the system of working will probably be similar it is possible that this important sinking may be completed in a shorter time than is now anticipated. The new winning at Wardley is also going on rapidly, most of the water feeders having been tubbed off, and it is expected that the High Main seam, the first important seam in the series, will be reached in a short time.

The Coal and Coke Trades in Durham are comparatively much steadier and brisker than the Steam Coal Trade of Northumberland. The great variety of the coal produced in Durham, consisting of steam, house, coking, and manufacturing coal, is much in favour with the trade of the latter county. The coke trade is extremely busy, and most works pushed to their utmost power of production, and the gas and house coal collieries are also pretty well employed.

The yearly "bindings," as stated previously, have, upon the whole, passed off quietly; the tendency, however, has been to higher rates of wages, and in a few instances some trouble has been experienced, and serious results are also likely to follow. As the system of Arbitration has been tried in the iron trade, and has proved most advantageous, why cannot the system be also applied to the coal trade? There appears to be no other remedy. We give below two cases likely enough at the present moment to prove most disastrous to the owners and workmen also.

At Sheriff Hill Colliery, near Gateshead, the works have been entirely closed, owing to a dispute as to heavy prices. This colliery has only recently been opened in a new direction by the present spirited lessee, and considerable expense has been incurred in opening out the seam, which is the well-known High Main. This seam has a band of stone situated near the middle of the seam, and this band varies in thickness considerably, and, of course, as the band *decreases* in thickness the price—that is the heavy price required—is less in proportion; acting on this, the band having considerably decreased in a certain district the owners proposed to make a reduction. But this the men have positively refused to agree to; and, consequently, the works have been entirely stopped, and the owner, Mr. Forster, has determined that if the men do not go in at the reduction proposed, which is only trifling, in a few days he will shut the works up entirely for six months.

Monkwearmouth is the most important case where a difficulty has occurred; and here a strike has actually taken place, nearly 600 men having left, taking their picks and tools away; and, as it is a very extensive and deep colliery, the injury likely to be done by such a proceeding is very serious to contemplate. On Tuesday night a crowded meeting of the pitmen was held at the Wheatsheaf Inn, Monkwearmouth, Mr. William Crake in the chair. The following suggestions, agreed to by the committee of management, were submitted to the meeting for its approval:—The committee considered it their duty to bring before the whole of the men, at public meeting assembled, the question as to the present rate of wages. The average of both pits had been taken, and if correct revealed the average of 3s. 5¾d. per day. If any of the men considered that sufficient the committee wished such men to say so; if on the contrary, the men thought it not sufficient, the committee recommended the whole of them to stand to their notices, as the time was about expired, and to at once send up their gear. This was put to the meeting, and carried unanimously. The next suggestion of the committee was whether they should send up a deputation to wait upon Mr. Stobart and the viewer, to see if any agreement was likely to be arrived at, but this was negatived. This statement of the wages appears to want one important element—*the time* over which the average extends not being at all mentioned. It is quite clear that for party purposes an *ex parte* statement of this kind can easily be got up, and the men could also easily manage to get a very low average for a given period. But what is required is the average earnings over a considerable period—say, for six months, or one quarter at any rate.

A testimonial of the most costly and magnificent kind is shortly to be presented to one of the viewers in this district—Mr. S. B. COXON, of Usworth. The intended testimonial consists of silver articles of great value and beauty, which will be described in a future letter. They were exhibited on the premises of Messrs. Reid, in Newcastle, on Saturday, and attracted much attention, and they will be again shown there on Saturday next. Mr. Coxon has lived a long period, and, indeed, commenced his career at the Usworth Colliery, near Gateshead; and he has materially assisted in extending and gradually developing that now important and extensive colliery. Most, indeed, of the improvements and extensions which have been effected here have been executed under his superintendence, and he is also connected with and manages several other collieries. He is universally respected for his upright character and most genial manners; and the testimonial alluded has been subscribed for partly by the numerous workmen and agents employed under him, and partly by numerous friends and neighbours resident in the district.

A very handsome testimonial is also shortly to be presented to another viewer—Mr. JOHN PEELE, of Springwell Colliery, near Gateshead, the reason for this token of esteem and approbation being the successful vindication made by him of the character for safety of the Stephenson lamp, as shown in the late experiments made at Hetton, which were fully reported in the Journal. A further account of this testimonial will be given shortly.

REPORT FROM THE NORTH OF ENGLAND.

April 14.—For Pig-Iron there is a brisk demand to report this week. On 'Change on Tuesday the market was animated, and prices were put up to 54s. for No. 1; 50s. 6d., No. 3; 49s. 6d., No. 4, net cash on trucks at the makers' works, or f.o.b. on the Tees. The attendance of gentlemen interested in the trade was large, and considerable business is reported to have been done. Since the previous market some makers stated that they had sold No. 3 iron at 1s. per ton advance on the then list rates. The present heavy deliveries and the quick demand, coupled with the steadiness of the Scotch market, and the pressure there is being put upon sellers for the delivery of iron under contract, warrant the expectation that pig-iron prices will gradually advance. The present favourable weather is being made the best of by shippers. A heavy quantity of iron has lately been sent by water. The return of the Cleveland Ironmasters' Association for March, showing the production and shipments during the month, and the stocks at the close, has just been issued, and of which the following is a copy:—

CLEVELAND MAKE OF PIG-IRON.

Month ending	Ironmasters' Asso.	Other makers.	Total tons.
March 31, 1870 ..... Tons	118,771	23,449	142,220
March 31, 1869	98,408	22,798	121,206
Feb. 28, 1870	104,932	20,037	124,969
Increase upon March, 1869			21,014
Increase upon February, 1870			17,251
SHIPMENTS FOREIGN.			
March 31, 1870	18,693	16	18,709
SHIPMENTS COASTWISE.			
March 31, 1870	16,194	1,187	17,381
MAKERS' STOCKS.			
March 31, 1870	58,417	17,010	75,427
Feb. 28, 1870	54,931	16,756	71,687
Increase upon February, 1870			3,740
WARRANT STORES.			
April 5, 1870	24,144	—	—
Feb. 28, 1870	29,384	—	—
Decrease upon February, 1870			5,240
ABSTRACT.			
Increase in make upon February			17,251
Decrease in makers' stocks upon February			3,740
ditto warrant store stocks ditto			5,240

Manufactured iron departments are generally in full work. Rail and plate mills are in constant employ, and heavy consignments are daily being made. Engineering establishments are, as a rule, turning out as much work as they well can; but bar-iron manufacturers are only quiet.

The quarterly meeting of the North of England Board of Arbitration was held at Darlington, on Monday, the proceedings being private. At the close, however, the following report was furnished to us:—

"There was a good attendance of the representatives of the board. The meeting commenced by the reading of the quarterly reports, which were considered satisfactory in character. Nearly all the minor disputes which had taken place in connection with labourers, &c., had been either settled or afforded a fair prospect of settlement.—On the recommendation of the standing committee, it was agreed that a large bill be posted in the various works, informing the men connected with the board that in future no disputed cases can be taking up by the standing committee if men have stopped work improperly until work be again resumed. A proposition was agreed to embodying this principle, and received the unanimous support of the board. The Weardale Iron and Coal Co.'s Works, the Whessoe Iron Company's Works, and the Bishop Auckland Iron Works were admitted to membership with the board.—It was also agreed that a certain amount be voted as compensation to Mr. Thomas Hughes, M.P., for time lost and services given to the board.—It was agreed to hold another board meeting in a fortnight, to consider the question of Sunday fettling and works' rules, questions which had been before the board for some time.—A resolution was passed to present Mr. D. Dale with a complimentary

illuminated address for his services as President of the board.—The meeting then terminated."

Messrs. Barningham and Co. (the Darlington Iron Company) had a number of their men before the Borough magistrates, on Tuesday, for violation of contract of service by leaving without giving notice, whereby the employers were put to a loss, and claimed for 1*l.* each from the men for waste of materials and loss of production. In consequence of the absence of one of the men's solicitors the hearing was adjourned for a fortnight.

CLEVELAND PIG-IRON TRADE.—C. E. Muller, Middlesborough—Since my last report the market for Cleveland pig-iron has continued to improve, and, as I anticipated, the spring trade with the Continent has opened up briskly. Shipments have been very heavy, while enquiries for forward delivery are more numerous than at any former period, and full prices have been paid. The make for last month has again increased, the number of furnaces being 105 against 90 in blast during March last year.

	Production.	Shipments coastwise.	Shipments foreign.	Warrant store.
March 31, 1870.....	142,220	17,381	20,590	24,144
March 31, 1869.....	121,206	12,687	12,519	67,486
Increase	21,014	4,694	8,071 Dec.	43,342

The production during March exceeds the previous month by 17,251 tons—31 days' make against 28. Makers' stocks have increased 3740 tons since the end of February, and now stand at 75,427 tons. The serious interruption to shipping caused by the boisterous weather during the first half of the month fully accounts for this trifling increase. The reduction in store for the month is 5240 tons. Iron is still coming out, and to all appearance the small reserve now left (24,144 tons) will be soon cleared out altogether. There is hardly any iron now on sale in second hands, and makers are very firm in their prices. No. 1, 53*s.* 6*d.*; No. 3, 50*s.*; No. 4, 49*s.* per ton f.o.b. in the Tees, or on trucks at works. It has been a subject of much remark, that the transit facilities of the Cleveland district have not kept pace with the rapid development of the iron trade. Great inconvenience has been felt through a scarcity of truck accommodation on the one hand, and on the other through insufficient depth of water in the river. Both grievances are now in a fair way to be remedied. The railway company are constructing a thousand additional trucks, while the Tees Conservancy Commissioners have resolved to commence dredging operations vigorously. The rail trade continues very busy. Merchant iron has not improved so rapidly, but prices are now looking up. The shipbuilders on the Tees and Tyne are full of work.

At the Cleveland Iron Trade Foremen's Association meeting, on Saturday, the discussion on Mr. John Dutton's paper, "On Boilers and Boiler Making for the last Thirty Years," was resumed. The paper, which was read at the previous meeting, was principally of an historical character. He referred to the "wagon shape" or "land boiler," as it was commonly called, the "Batterby boiler," the "fire-box boiler," the "baloon," and the "egg-ended." The "Cornish" boiler he said, for durability and efficacy for all kinds of work in large manufacturing establishments, stood second to none. The present demand for them was great, and his opinion was that for durability and economony this class of boiler, when properly set, is as good as any kind yet brought out. One thing appertaining to them might profitably be considered, which was that due regard was not paid to the firing. He was of opinion that the best and most economical smoke-burner is the shovel of the fireman, when properly attended to. Mr. Dutton then described the manufacture of the boiler, and stated that it was formerly considered as one of the chief rules of boiler-making to put in as many seams as possible, under the belief that seams strengthened the curves wherever they came. That such an idea should ever have obtained credence would appear almost impossible, yet such was the fact. Mr. Dutton then described single and double rivetted seams, and he considered the best proportion for single rivetted seams to be 2¼ lap, 1¾ pitch, and ¾ rivets; for double rivetted seams, 3½ lap of plate holes, ⅛ from edge 1¾ centres of holes throughout, and ¾ rivets. Sir Wm. Fairbairn showed the plate being 1·000 double rivetting would be ·700, and single rivetting ·560. Mr. Dutton stated that boilers being well put together, with good hole, &c., that machine rivetting is stronger than hand rivetting in the proportion of 4 to 4, and cheaper by about 25 per cent. It was not possible for human power to close the plates and joints, neither was it possible for them to exert power sufficient to press a rivet into the whole as it really ought to be, therefore machine power must be brought to bear upon them, and he was of opinion that where the plates used in the manufacture of boilers exceed three-eighths or seven-sixteenths of an inch in thickness, man has not the power to produce the effect required—to closely work the bodies together.

The adjournment of the discussion, which commenced at the close of the reading of the paper, was moved by Mr. Newcomb, who asked the following questions, which he had previously apprised Mr. Dutton it was his intention of putting, seeing that it was upon these points that much of a good boiler depended:—1. On hot or cold bending of the plates.—2. Punching or drilling of the holes.—3. Butt or lap joints.—4. Rivetting by hand or machinery.—5. Drifting.—6. Caulking. The President also asked for the best method of securing the joints of the tubes in the boilers, such as the application of a ring or otherwise, for nearly all the explosions of tubular boilers are-e from the collapse of the tube, and it was most desirable to secure the best workmanship and strength possible therein.

Mr. DUTTON, in reply, said he would first allude to the bending of plates, which should be done, if possible, while they were warm, as that would detect defective plates. Second, as to punching. Punching, when properly done, was not such an evil as many imagined, but due regard must be paid to the proper size of the punch and die, and care be taken in being correct in setting them; and also so to arrange the punching as to allow the two smooth surfaces to come together by keeping the proper side of the plate upwards in punching. Thirdly, butt or lap-joints. Certainly butt-joints to the eye looked neater, but for strength and durability lap-joints were best, and he would say weld as much as possible together, for if he could he would entirely weld a boiler into one piece. Fourth: In regard to rivetting, he would say do as much as possible with the machine, for where it could be applied it was best. Yet much depended upon the proper form of the rivets, so as to fill the holes punched. All rivets should be a little rounded under the head, and not squared up to a sharp corner, for when the holes were properly punched the two out ends of the rivet-holes should be slightly the largest, and then they would draw the plate close together when properly rivetted. Fifth, drifting: Never use a drift, but to draw the plates together, or remove any little roughness out of the hole. If the hole were not properly punched, so as for the plates to meet each other, use a rimer. Sixth, caulking: Do as little as possible this way. It is frequently a substitute for bad workmanship, and when resorted to it ought to be done with care, so as not to lift the plate edge up, or cut into the plate with the caulking tool. And with regard to the best method of securing the tubes from collapsing, the use of the annular expansive rings at the joints of the plates was much superior to any other method for keeping the tubes from collapsing; and, likewise, the expansion and contraction of the tube, thus preventing the giving way at the joints, and also the supporting of tubes by the insertion of Galloway's tubes into the main tube. In conclusion, in reply as to what he considered the most useful boiler for ordinary use, and not for any special purpose, he would say the Cornish boiler. As to the marine and locomotive boiler, they had in themselves enough to fill a large volume each. He confined his remarks to the common boilers of the day. He thanked them for the attention they had paid to his remarks.

The discussion on the paper was of a very practical and interesting character; and on the motion of Mr. Newcomb, seconded by Mr. Walsh, a hearty vote of thanks was accorded to Mr. Dutton. The next paper to be read is "On the Compound Engine." On June 1 the members of the Association will visit the Eaton Mines, of Messrs. Bolckow, Vaughan, and Co., the general manager, Mr. Williams, having kindly consented to allow them to do so.

MINERS' DELEGATE MEETING AT DURHAM.—The monthly meeting of the delegates from the collieries in the Durham Miners' Mutual Confident Association was held on Saturday, at the house of Mr. George Oswald, Market Hotel, Durham. Mr. William Crake, of Monkwearmouth, President having taken his place as Chairman, congratulated them on the result of the new agreement. The financial business was then gone into, with the following result:—Collieries represented, 25; number of members, 2898; income, 2·9*l.* 1*s.* 5½*d.*; expenditure, 35*l.* 19*s.* 10*d.* A sum of 23*l.* 1*s.* 7½*d.* having been retained in hand for contingent expenses, the sum of 205*l.* was ordered to be placed in the hands of the bankers. The petitions which had been pushed forward amongst the inhabitants of Durham, Stockton, and Hartlepool, in favour of the amendment of the Miners' Regulation Bill, now before Parliament, were presented to the meeting. The petition from the three towns covered 128 sheets, measuring 224 feet, and containing 4716 signatures, as follows:—Hartlepool, 1802; Durham, 1762; Stockton, 1152. The petitions will be forwarded in due course to Parliament. A lengthy programme of suggestions from various collieries in the Union remained to be discussed on the conclusion of the above business. The afternoon, however, being far advanced, it was decided to defer its discussion until an extra delegate meeting, to be held in a fortnight.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

April 14.—The Quarterly Meetings of the Iron Trade, yesterday at Wolverhampton, and to-day at Birmingham, have shown that the trade is looking up. Orders have increased since the decision to make no change in prices; the accounts from the competing districts show that they are getting their order-books full, prices are, consequently, rather strengthening, and the feeling at both meetings this week was hopeful, and there are actual purchases which will keep the works in better employment than they have been. Prices ruled firm for all descriptions of finished iron, though the firms obtaining list prices are still the exceptions to a very general rule. Pig-iron, of which the local production has increased since last autumn—another furnace having recently been blown in at Priestfield—was in good demand, at advancing prices, all-mine pig being quoted 3*l.* 12*s.* 6*d.* to 3*l.* 17*s.* 6*d.*, and the late advance in hematite, as a consequence of the increasing demand for this iron in the Bessemer process, was fully sustained. No increase has been, or is likely to be, made in the rail production of the district, which averages now 500 tons a week.

The Hardware Trades appear to be slowly improving. The foreign and colonial demand is better, and the home trade is also a shade more active. The demand for various fittings for railways is rather brisk, and the lock trade is pretty good. A new lock is being made in the South Staffordshire district, which is likely to attract some attention. It is invented and patented by Mr. Andrews, of Melbourne, Australia. The latch-bolt is situated at the bottom end of the vertical arm of a crank-lever, the horizontal arm of the lever being fixed immediately above the follower, on the spindle of the latch. The crank-lever turns upon a centre, which may be in the upper corner of the lock case, the arm of the lever not being respectively parallel to one of the vertical and one of the horizontal sides of the case when the lever is in its normal condition.

Our local Mining Engineers' Associations seem to spur on each other to greater activity. At a monthly meeting of the South Midland, at Wolverhampton, on Monday, the President, Mr. H. Beckett, F.G.S., and the hon. secretary, Mr. J. Cope, reported the result of their visit to Coven Heath, near and to the west of the town, in search for coal, as a deputation from the last meeting.—[The particulars of the proceedings are given in the Supplement to this week's Journal.]

Mr. Walter Ness, mining engineer, of Pelsall, who recently read a paper "On the Coal Field of Fife," which attracted some attention, lectured at Wolverhampton, in connection with the South Staffordshire and East Worcestershire Association of Mining Engineers. The subject was "Iron and its Oxides," which was treated with much ability, and in a very interesting manner, the lecture being illustrated by many experiments. At the close he invited questions, and the opportunity was taken advantage of by many of the auditors, to whom Mr. Ness's answers were as interesting as his lecture had been.—[An abstract of Mr. Ness's paper is published in another column of this day's Journal.]

Two important decisions have been given in the Dudley County Court by Mr. Rupert Kettle, the first, Walters *v.* Smith, referring to the taking over of tools, timber, &c., upon change of chartermaster; the second, Clark *v.* Gold, making the "fortnightly reckoning" final, except in case of fraud. In an action, Smith *v.* Walters, the latter, who is a chartermaster, did not dispute the claim of Smith, the owner of the colliery, for 83*l.* for goods sold and money lent. In Walters *v.* Smith it appeared that Walters, finding after six months' trial that he could not work the pit at a profit, gave 14 days' notice to leave. Smith said he would work the pit himself, and told Walters not to take anything out of it, as he would take it at a valuation in the usual way. Smith's valuer did not complete the valuation, Walters's did. After a time Smith refused to purchase the pit timber, tools, &c., alleging that he did not intend carrying on the pit, at the time giving Walters a written notice that he should not allow him to take anything off the premises until the above-named debt of 83*l.* was paid. Walters now claimed from Smith the amount of the valuation made by his agent, on the ground that it was the custom of the district for the out-going chartermaster to be paid by the person continuing the working for all tools, timber, hanging coal, &c., in the pit; and, secondly, on the ground that defendant had expressly agreed to a valuation being made. Mr. Kettle, after taking time to consider his judgment, gave his decision in favour of Walters for 163*l.*

In the case of Clark *v.* Gold, the former, who is a collier, sued the latter, his late employer, for 14*s.* for several half and quarter days which he alleged had been from time to time stopped from his wages. The judge (Mr. R. Kettle) said Clark must be nonsuited; he always held that the "fortnightly reckoning" between the master and men was to be a settlement of all accounts and time, and to be treated as "an account stated." This could not be re-opened unless it was discovered that fraud had been resorted to. It would be a monstrous thing if men, after settling with the masters from time to time, were to be allowed, several months afterwards, to have all the accounts gone into again. No business could be carried on with such a system, and he hoped the men would take notice of his remarks. Referring to the decision, Mr. J. Stokes, the attorney for Clark, states that before the hearing he advised that Clark could not recover, but that it was preferred to take the judge's decision as a guide to the future. He also explains (referring to an erroneous impression which has arisen among the men) that if on the reckoning night the master does not pay them up the decision does not prevent them recovering the balance.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

April 14.—There is no alteration with regard to the business doing at the iron works in the neighbourhood of Chesterfield, and on the Erewash Valley route of the Midland Railway. The Butterley Company, who have one of the largest iron concerns in the kingdom, have some extensive orders in hand, and are doing a considerably larger trade than for the corresponding period of last year. At Staveley, Sheepbridge, and Eckington the workmen are kept well going. There are now a rather increased number of furnaces in blast, so that the production of pig-iron in Derbyshire is now in excess of what it has been. A good deal of ironstone is being imported from Northamptonshire, and some from Lincolnshire, for mixing with the local ores, the combination producing a very fair quality of iron. The works at Langley Mill, whose steel by the nitrate of soda process was made by Mr. Heaton, are quiet, and appeared to us while passing along the line to be altogether closed. The House Coal Trade has been very active since the commencement of the year, so that the coalowners in Derbyshire have had more than their share of the increased tonnage which has been sent to London. In steam coal there is a little more doing, and a still further improvement may be looked for as the season advances, and the shipments to the North of Europe commence. About two or three weeks ago we were threatened with a strike at the Norwood Colliery, belonging to the Sheepbridge Coal and Iron Company, although there is no miners' Union in the entire of the county of Derby. Fortunately the offer of the company to refer the matter, which related to an advance of something like 2d. per ton, to arbitration was accepted, and no serious interruption to work took place. The Clay Cross Company, from whose pits nearly one-half of all the coal carried by railway into London is sent, have just made known that the wages of the colliers employed by them will be advanced about 10 per cent. The whole of the stall men will receive something like an advance of 2d. per ton on the best coal, and the banksmen 3d. per day. It is not unlikely that the advance which has been conceded at Clay Cross, and given a short time since at Staveley, will be given by other large employers of labour in the same district.

The heavy branches of the Sheffield trade are now very active, and with the orders at present in hand are likely to be so for some time. The armour plate works are still very busy, without any prospect of there being any falling off. Bessemer rails, as was generally anticipated on the reduction of the royalty to a really nominal sum, are in very brisk request, and makers' powers of production are fully taxed to meet the demand for them. The works in the Rotherham district continue to be well employed, there being a very fair trade doing in railway *material*; and the same may be said with regard to the establishments at Elsecar and Milton, belonging to the Messrs. Dawes, who have long enjoyed an uninterrupted term of activity in most branches of business, and whose iron and rails enjoy a high reputation, not only in the home but other markets. The business doing in House Coal for London has been well maintained, but there has been a reduction in the price, owing to the opposition of two of the principal merchants, and who have caused the others to sell on the same terms. During the present week the tonnage sent to the metropolis has been considerable, considering the time of year, whilst the stocks are low at nearly all the depôts. In Steam Coal there is a little, and what may be termed an increasing, improvement; whilst there is every appearance that the Baltic trade will commence much earlier than it did last year, one vessel, it is said, having already got free from the ice. Coal owners, however, have long been dissatisfied with the present arrangements for shipping "hards" from the Yorkshire ports, and an effort is being made to effect certain alterations, which will be of a beneficial character. A meeting was held in the early part of the week, and arrangements made for the holding of another one, to which the trade generally of South Yorkshire will be invited, when the subject will be fully gone into. There is no change with regard to the state of affairs at Thorncliffe, where efforts have been made to effect a settlement, so that, judging from appearances, there is no prospect of the men returning to work unless they do so on the terms already offered by the firm, and which is not unlikely.

MINING IN THE UNSTONE VALLEY, NEAR SHEFFIELD.—The new branch railway on the Midland system, between Sheffield and Chesterfield, has been the means of inducing capitalists to develope the rich mineral resources of the Unstone Valley, distant eight miles from Sheffield. The district for miles has long been noted for its valuable seams of coal and ironstone, but which could not be made available owing to the want of railway facilities. All that, however, has now been changed, and sinking operations are now being actively pushed forward in the district, which before long will become a most important mining one. Amongst the collieries now being opened out, one of the principal will be that of the West Staveley Company, and which, when completed, it is anticipated will raise something like 1000 tons of coal per day, finding employment for 500 or 600 hands. The plant and machinery are the most complete and powerful that can be seen. There are two shafts, one 12 ft., and the other 11 ft. in diameter; and the black shale (Silkstone) seam will be reached at a depth of 110 yards, to get to which some fine beds of ironstone will be met with, and it is said that the company have it in contemplation to erect some blast-furnaces near their pits. A good deal of water has been met with in the pumping shaft, and for lessening which a grasshopper engine of 350-horse power is kept constantly going. It can be worked up to 500-horse power, and either as a high-pressure or condenser. It has a 70-in. diameter cylinder, and 10-ft. stroke, raising about 1500 gallons of water per minute. The beam is a very powerful one, being made of wrought-iron, and weighs about 8 tons. The other engines, which include a capstan one, capable of drawing up 30 tons when in gear, were made by the well-known firm of Barclay and Co., of Kilmarnock. There are five large boilers, four single-flued, and a double-flued one, the latter weighing about 14 tons, and the others 8 tons. The winding-engines, which are of 30-horse power, have conical drums, 12 ft. in diameter in the smaller part, and 14 ft. in the largest, so that they will raise from the bottom of the pit in nine strokes. To clear the pumping shaft a 14-in. diameter plunging-lift is about to be put down. A washing-machine is also to be fixed on the ground, and for which the foundations have been made, whilst the site for a large number of coke ovens (from 50 to 100) has also been marked out. A branch railway from the colliery to the Midland line, at a point a short distance to the south of the Unstone-station, has been nearly completed, so that every preparation and facility have been made for doing a large trade in coal and coke. Not far from the West Staveley Colliery Mr. Rangeley has a drift pit, from which a good deal of coal of excellent quality is being raised, and it is said that he is about to erect some blast-furnaces, he having formerly had an iron-making establishment close to the present line of railway, but which was required in making the line. The Messrs. Rhodes, who have one colliery at work, are said to be about to open one out in the valley midway between Unstone and Dronfield, having secured a considerable tract of mineralised ground, the principal seam in which will be the black shale (or Silkstone, as it is called in South Yorkshire), a very fine house coal, and running between 4 and 5 ft. in thickness, and in some instances rather more. Mr. Senior and others are also spoken of as likely to break ground in the district, now that the railway affords such facilities for sending to all parts of England. It will be seen that the valley of the Unstone will before long become a very important district, increasing the present mineral traffic on the Midland Railway by at least 600,000 tons of coal per annum.

SOUTH YORKSHIRE ASSOCIATION OF FOREMEN IN THE COAL AND IRON TRADES.—An association has just been formed in Barnsley, but extending throughout the western and southern coal and iron districts, of the bottom stewards in collieries and foremen at the various iron works, and which promises to supply a want which has long been experienced. The rules states that—"The association is established for the purpose of bringing together those engaged in the direction and superintendence of the various works connected with the coal and iron trades, for mutual improvement, and for promoting more frequent exchange of opinions on interesting questions constantly arising from the progressive nature of the trades. Also for bringing under the notice of members any subject or invention which from its novelty, usefulness, or otherwise may be instructive or interesting. Further, to grant pecuniary aid to such members as may require it, by granting superannuation allowances, and rendering aid to members who through accident may be unable to follow their usual occupation. The committee hope that, being middle men between the employers and the workmen, the association may be the means of averting many of the disastrous strikes that take place. The association will not on any occasion discuss the politics of the trade. It has no secrets, but will rather court publicity. Its objects are purely philanthropic and instructive, and it will essay to assist its members in creditably filling the important posts confided to them. The ordinary members to consist of foremen having the control and superintendence of the workmen connected with their various departments. The honorary members will consist of employers, mining engineers, and other gentlemen who may be desirous of furthering the objects of the association." A committee *pro tem.* has been appointed as follows:—Mr. J. Quarlter (Chairman), Old Foundry, Barnsley; Mr. C. Beevors, Higham Colliery; Mr. J. Langley, Willow Bank Colliery and North Gawber Colliery; Mr. G. Jackson, Silkstone Fall Colliery; Mr. W. Fawcett, South Yorkshire Iron and Steel Works, Penistone; Mr. J. Needham, Old Foundry, Barnsley; Mr. W. Ford, New Gawber Colliery, near Barnsley; Mr. J. Guest, Edmunds Main Colliery; and Mr. E. Hall (secretary). As the objects of the association are of a thoroughly practical character, and as the members will be in an position to bring about, amongst other objects, a good understanding between employers and employed, and so, probably, lessen the number of strikes, which are of such frequent occurrence in South Yorkshire, we trust that it will fully realise the expectation of the promoters, supported, as we understand it will be, by a large number of colliery proprietors and other gentlemen of influence.

REPORT FROM MONMOUTH AND SOUTH WALES.

April 14.—It is gratifying to find that the anticipations which have been expressed in previous reports are being gradually realised, and it may now be observed that the Iron Trade generally is in a fair way to attain that satisfactory position which had for some time past been looked for. The firmness shown by the manufacturers in regard to prices at the Quarterly Meetings is beginning to produce that effect on the market which it was by many expected to do. Buyers have been convinced that to wait any longer for a reduction in rates is altogether useless, and the result is that they are now beginning to enter into transactions with much greater freedom than they have done before since the beginning of the year. Orders on all accounts are now more numerously offered at full list quotations, and in some instances a slight advance is obtained. The rail department more particularly evinces a large degree of activity, and nearly all the works in the district are very largely employed in working off rail contracts for different parts of the world. The Russian demand, which there is still much reason to believe will be the mainstay of the trade during the summer months, shows improvement, and each week represents some increase in the clearances made to the northern ports. As the year advances the trade with the Muscovite empire will mature gradually, and while the vast lengths of railways in course of construction, and about to be constructed, in that country are proceeded with the quantities of railway material required must regularly increase, so that it is likely that the expectations entertained at the beginning of the year, sanguine though they were, will yet be realised. A more perceptible advancement will be made in the Russian trade after the beginning of the next month, which has been fixed upon for chartering steamers of large tonnage at the local ports to carry railway iron to the northern markets, and still greater activity will then prevail at the works. It is not at all improbable either that other sources of employment will spring up in the course of the next month, as continental requirements, which are pretty large at present, are expected, if advices are reliable, to increase, and Welsh makers will, no doubt, secure a very fair share of the orders to be given out on this account. With such prospects before them makers are, of course, extending their rail-making capacities, and at those establishments which have hitherto been devoted chiefly to miscellaneous descriptions of make the proprietors are making arrangements for using their mills in the rolling of rails. In reference to home requirements, there is little encouraging news to report. Home buyers continue to limit their speculations as far as necessity will allow them to, and, probably, this restriction would not be much felt or regretted should it continue until such time as a temporary lull might again take place in the foreign demand. At present makers are well able to find full employment for their hands, and as foreign requirements are likely to keep them going for some time to come they will not only be able to sustain present rates, but are likely to be in a position to command even higher prices than are now quoted. This encouraging state of things is not without its beneficial effect in other directions. Seeing the attention of makers generally drawn to the manufacture of rails, buyers are apprehensive of unfavourable results in other branches of the trade, and bars are, consequently, being more enquired for than for some time past, and makers are not in all instances disposed to accept contracts at the ruling rates. If makers are firm, therefore, for a short time some good results will be produced in the markets, and a higher scale of prices will be obtained generally. Pig-iron and plates suitable for shipbuilding purposes are in better request. The resolution of makers to further reduce the production is being adhered to, and the Tin-Plate Trade is gradually assuming a firmer basis. The price of tin is still rising, and hence the necessity of advancing quotations for plates.

In the Steam Coal Trade a large business continues to be doing, orders being received freely from the continental and other foreign markets. In connection with the house coal trade matters are a little more encouraging. The men in the Rhondda Valley, after three or four days' strike, resumed work, the masters having determined to let them take their own course. The usual quantities are, therefore, being sent to the ports for shipment.

In noticing the rumour last week respecting the probable sale of the Dowlais Works, I in no way endorsed the correctness of the report. It has since transpired that the works are not for sale in the ordinary way, but, on the other hand, it is generally understood that Sir Ivor Guest is quite prepared to accept a suitable offer, provided any person or company is disposed to go in for such a vast speculation. Now that the iron trade is in a tolerably prosperous state, no doubt the profits at Dowlais must be large, and the extensive collieries recently opened have added very largely to the prosperity of the concern.

At the last Glamorganshire Quarter Sessions the chief constable was directed to prepare a return giving particulars of the powder magazines in the county. The Chairman (Mr. R. O. Jones) said there was reason to fear that some of them were not very secure.

Once more it is announced that the difficulties in the way of re-starting the Penydarren Works are removed, and that the establishment will be in operation in the course of a few weeks.

The exports of coal from the local ports during the past month, and the corresponding month of last, were:—Cardiff, 243,754 tons, against 193,178 tons in March, 1869; Newport, 37,910 tons, against 20,049 tons; Swansea

64,977 tons, against 51,148 tons; and Llanelly, 18,410 tons, against 13,289 tons. Coastwise the shipments were:—Cardiff, 75,086 tons, against 77,745 tons in the corresponding month; Newport, 74,539 tons, against 66,512 tons; Swansea, 22,276 tons, against 24,641 tons; and Llanelly, 13,460 tons, against 16,558 tons. Cardiff also exported 12,960 tons of iron, and 3599 tons patent fuel; Newport 14,334 tons of iron, and Swansea 1709 tons of iron, and 12,827 tons of patent fuel. The largest clearances of iron were, as usual, to the American markets.

The Alexandra Dock Works, Newport, are now being vigorously pushed forward. Nearly 600 hands are altogether employed, and there are 13 engines and cranes on the ground. At the present rate of progress the completion of the docks within the anticipated time may be safely anticipated.

THE MORFA COLLIERY INQUEST.—The enquiry into the Morfa Colliery explosion was resumed on Thursday before the coroner, Mr. H. Cuthbertson, when, after some other witnesses had been examined, Mr. Wales, Her Majesty's Inspector of Mines for the district, was examined. He said the different witnesses had given them full details of the mode of working and ventilating which had been pursued in the colliery up to the morning of the explosion, and he would, therefore, only add that, with the exception of some 3-0 or 400 yards of the principal roads near the shaft, where from 50,000 to 60,000 feet of air was passing per minute, the workings and roads were lighted exclusively with locked safety lamps, and shot firing was strictly prohibited. The evidence given by the different witnesses was conflicting on several important points, especially as to whether the explosion was that of gas or gunpowder, several deposing that the smell was that of after-damp, and others that it was the smell of gunpowder. he principal evidence as to gunpowder being in the pit was that of the witness William Nettle, one of the master sinkers, who had survived, and who deposed to seeing on the Saturday night previous to the explosion 40 lbs. of gunpowder in the passage leading to the engine-house, where it was generally kept, and some of it was used subsequently. And as to gas, William Drummer, who was night foreman up to within a short time of the explosion, deposed to having seen a little gas oozing through the stopping near the west stable, three or four weeks before the explosion, and, consequently, he had examined that place particularly twice every night. John Smith had said he was just in the act of lighting his lamp, with the top off, near the canvas door in the Cribbor drift, when he heard the explosion, and he believed it was the gas which fired at his open light. If Smith did fire the gas then, doubtless, the drift from the canvas door right back to where Drummer met with it occasionally, a distance of 50 yards, must have been filled with gas, which would be quite sufficient to account for the sad results without the aid of gunpowder. On the other hand, the evidence of William Barrass, under viewer, who said he examined the place spoken of by Drummer regularly, went to show that he had never found sufficient gas there to show in his lamp, after being mixed with the air passing at that point. And the night overman, John James, had said he passed from the west stables along the canvas door on the Sunday night previous, and that at a quarter past five o'clock on the very morning of the explosion he examined the very place near the canvas door, and on neither occasion did he find any gas. Such being the evidence on so important a point, after carefully weighing all the circumstances, he had come to the conclusion that there could not have been any accumulation of gas in the place in question, but that probably the witness Smith was overtaken by the flame just as he was about to light the burner, and the fact that the destruction near the shaft was greater than elsewhere was, he thought, strong evidence that the explosion, whether of gas or powder, originated near that point, and not on the Cribbor drift. There were two other important facts which formed an important clue, and threw much light upon the matter. He meant the second explosion, which occurred in the air engine-house just a week after the first, and the stowing of the two north drifts after August last, which cut off the only outlet for the gas exuding from the Fawr old goaf, of 40 acres extent. After these drifts were stowed up, he believed, the pressure of gas thus confined became so great as to force its way through the stowing, and passed down the stable along the water level and up to the air engine-house, where the second explosion occurred. From a careful consideration of the whole of the evidence, and his own inspection of the workings a few hours after the explosion, he had come to the conclusion that the explosion originated in or near the engine-house, and from the fact of the flame reaching such a distance, he believed there must have been a large quantity of gas lodged in the water level, which had passed up to the air engine-house, where it was exploded in a manner exactly similar to the second explosion; and the gunpowder deposed to by Nettle, not having been afterwards found, doubtless it was also exploded. After condemning the stopping up of the north drifts, above alluded to, Mr. Wales concluded by saying it was his opinion that a constant and proper communication should be maintained in all old workings in which gas is generated, and the return air-ways, or otherwise the gas would most assuredly force its way out at some point, and not unfrequently when and where least expected, as he believed it did on that occasion.—The jury found that the explosion was caused by fire-damp in the west stables, and that blame attached to some one, but to whom the conflicting nature of the evidence prevented the jury saying.

A NEW DEMAND FOR TIN-PLATES.—Leaving a railway station the other day, for a walk across the country, I fell in with a commercial traveller, who, I found, "represents" a tin-plate firm at Neath; and, after some chat, I had from him the following bit of interesting news:—His "people" have had, for some years increasing transactions with an agent in Paris. This agent had long looked on tin-plate as an article which, if it could be cheaply and effectually decorated, would spring into much more general use. After a variety of experiments, extending over a considerable time, he has at last patented a process for the ornamentation of tin-plates. By means of colours, prepared in a way which is his secret, the tin-plate is printed. All kinds of neat patterns, such as plaids, names, devices of various kinds, &c., the effects heightened by embossing, can be durably placed on the tin-plate by a kind of printing press, and the article afterwards made up by the workman into the desired shape, since the printed surface is not injured or removed by any moderate amount of hammering, nor will solder and the solder iron hurt the preparation. Many thousands of very pretty boxes, each to hold a pound of biscuits, and intended for Christmas and New Years gifts, were made from these tin-plates in the fall of last year. Canisters, boxes of all kinds, &c., will be constructed of it, instead of the ordinary tin-plate and its fancy papering covering, because of the greater durability of the printed tin material. The same ingenious Frenchman has patented another process for a silicious lining to tin-plate canisters, so as to retain in the highest state conserves, pickles, preserves, &c., though I would rather hear of an extra coat of tin than one of glaze. However, this is another of the infinity of ways in which tin comes more and more into use. Between the embossing and the easy deposit of colours, I should not be surprised to see an imitation of metal enamelling, by which last process works of art have been produced; and, eventually, to look on a picture on tin-plate offered the public at 2s. 6d., much the same in merit as one I saw on Saturday, on what looked like tin-plate (but was not), and the sum asked for which was 10 guineas.

In the Court of the Vice-Warden of the Stannaries
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the TRENCROM MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the above-named company by the Court was, on the 25th day of March last, presented to the Vice-Warden of the Stannaries by William Henry Lanyon, Richard Lanyon, Tobias Edward Lanyon, and John Rodolphus Lanyon, contributories of the said company, and that the said Petition is directed to be heard before the Vice-Warden, at the sittings of the Court, to be holden at the Prince's Hall, Truro, within the Stannaries of Cornwall, on Wednesday, the 11th day of May next, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitor, or agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioners, their solicitor, or agents, within twenty-four hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 6th day of May next, and notice thereof must, at the same time, be given to the petitioners, their solicitor, or agents.

F. HEARLE COCK, Truro, Cornwall
(Solicitor for the Petitioners).
HOOKE AND STREET, 27, Lincoln's Inn-fields, London
(Agents for the said Solicitor).

Dated Truro, 13th April, 1870.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the HALLENBEAGLE AND EAST DOWNS MINING COMPANY.—TO BE SOLD, BY PUBLIC AUCTION, at HALLENBEAGLE AND EAST DOWNS MINE, in the parishes of Kenwyn and St. Agnes, within the said Stannaries, under the directions of the Registrar of this Court, on Monday, the 25th day of April instant, at Twelve o'clock at noon, subject to such conditions as shall be then and there produced, in one or several lots, as may be then and there determined on, the interest of the company in the SETTS or GRANTS under which the mining operations of the said company were carried on, also the undermentioned

MINING MACHINERY, MATERIALS, AND OTHER EFFECTS, viz.:—

ONE 70 in. cylinder PUMPING ENGINE, 12 ft. stroke, equal beam, with THREE BOILERS, about 12 tons each.
ONE 60 in. ditto, with THREE BOILERS, about 10 tons each.
ONE 24 in. cylinder WHIM ENGINE, 6 ft. stroke, with fly-wheel and iron cage complete, and BOILER, 9 tons.
Steam capstan, attached to whim engine; balance bobs to 60 in. engine; large quantity of valuable pit work, from 9 to 17 in., comprising 115 pumps, 4 working barrels, 4 windbores, 3 H and doorpieces, 2 matchings, 1 clack seat piece, 2 pole cases, 3 plunger poles, 200 fms. 8 in. rope, 200 fms. chain, 1 8-arm capstan, 6 54 ft. 14 in. main rods, 12 pairs strapping plates, 18 ft. long, 15 fms. ladders, 100 fms. launders, staples and glands, double crab winch and 50 fms. chains, 6 wood sheds, tram wagons, about 20 tons of new and old iron and timber, 4 shears, pulleys, and poppet heads, horse whims, whim ropes and chains, 5 tons old chain, lead, brass, miners' chest, hand and wheel barrows, scales, beam, stand and weights, 2 smiths' bellows, 2 anvils, lot of miners', smiths', and carpenters' tools, sashes, brick, slate, shovels, picks, shovel and pick hilts, candles, leather lanterns, account house furniture, and a variety of other articles and effects in general use in mines.

For further particulars, application to be made to R. M. PASCOE, the Officer of the Court in possession at the mine.

HODGE, HOCKIN, AND MARRACK, Solicitors, Truro.

Dated Truro, 5th April, 1870.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE WHEAL HOPE MINE.

TO BE SOLD, pursuant to an Order made in a Cause of Vivian *v.* Nicholls, dated the 16th day of December last, BY PUBLIC AUCTION, at WHEAL HOPE MINE, in the parish of Perranzabuloe, within the said Stannaries, on Thursday, the 28th day of April instant, at Eleven o'clock in the forenoon (either together or in lots), the undermentioned

MINING MATERIALS AND EFFECTS, viz.:—

44 in. ENGINE, with first piece of main rod and caps.
TWO BOILERS and fittings, complete; balance bob; 14 in. H piece; 11, 12, and 13 in. doorpieces; 11 in. working barrel; 11, 12, and 15 in. windbores; 1 9 ft. 6 in. pump; and 2 9 ft. 10 in. pumps.

Further information may be obtained on application to the Bailiff of the Court in charge at the mine.

CARLYON AND PAULL, Plaintiff's Solicitors, Truro.

Dated Registar's Office, Truro, 11th April, 1870.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE EAST PROVIDENCE MINES.

TO BE SOLD, pursuant to an Order made in a Cause of Hollow *v.* Evans and Others, dated the 12th day of February last, BY PUBLIC AUCTION, at the Registrar's office, at Truro, on Wednesday, the 27th day of April instant, at Twelve o'clock at noon, the following PARTS or SHARES:—

100 (3640th) PARTS or SHARES of the defendant, Joseph Evans;
52 (3640th) PARTS or SHARES of the defendant, James Forbes; and the
20 (3640th) PARTS or SHARES of the defendant, R. Mayhew,
Of and in the said MINES.

F. HEARLE COCK, Solicitor, Truro
(Agent for R. H. Bamfield, Plaintiff's Solicitor, St. Ives).

Dated Registrar's Office, Truro, 12th April, 1870.

THE SULBY RIVER LEAD MINING COMPANY (LIMITED).

IN LIQUIDATION.

TO BE SOLD, BY AUCTION, on Tuesday, April 26, 1870, at the SULBY RIVER LEAD MINE, all the MACHINERY, PLANT, BUILDINGS, and MINING MATERIALS belonging to the said company, comprising—ONE WATER WHEEL, 50 feet diameter by 3 feet 6 inches breast; upwards of 50 fathoms of rods, pulleys, and stands; bob and requisites; upwards of 20 fathoms 8 inch pumps, ladders, and shaft casing; large and powerful crane or winch; iron blocks, chains, smiths' bellows, anvils, and tools; picks, spades, iron, steel, powder, grease, a quantity of timber, three substantial wood houses, and all the other utensils on the premises; also

The GOODWILL and LEASE of the MINERALS from the Crown.

The materials enumerated above are nearly new, and of excellent quality.

For further particulars, apply to—
GEO. MALEY, Athol-street, Douglas, Isle of Man
(the Liquidator).

UNRESERVED SALE OF MINE AND MATERIALS.

SNAEFELL MINING COMPANY (LIMITED).

IN LIQUIDATION.

TO BE SOLD, BY AUCTION (by Order of the Liquidators appointed by the company), on Wednesday, the 27th day of April inst., at Twelve o'clock noon, in the Parlour at St. James's Hall, Douglas, Isle of Man, all and singular the SNAEFELL MINE, situate in the parish of Lonan, in the Isle of Man, together with the LEASE, and all PLANT, IMPLEMENTS, MATERIALS, and PROPERTY of every kind belonging to the said mining company.

The mine is held under lease from the Crown for a term of years, of which eighteen years were unexpired on the 10th October last. The sett consists of 567 acres of land in the parishes of Lonan and Lezayre.

Snaefell Mine is in good working order, and the plant, amongst other articles, consists of a WATER WHEEL, 50 ft. diameter, by 3 ft. 6 in. breast, with all requisite gear for pumping and drawing.

There are on the premises—joiners' shop, changing-house, lead-house, crushing-mill, smithy, with tools, &c.; office, with furniture and fixtures; miner's cottage, with furniture.

The washing-floors, though small, have all requisite fittings for washing and dressing.

There are small quantities of iron, steel, timber, and other stores on the premises, and a variety of mining tools, implements, and materials.

The shaft is sunk to a depth of 70 fms., with levels at 25, 40, 50, and 60 fms. below the adit.

Both lead and blende ores are being raised from the mine, and the purchaser will be entitled to any ore raised, if not dressed previous to the sale.

The whole will be set-up for sale in One Lot, and will be sold without any reserve.

The mine and property can be inspected at any time on application to Capt. HENRY JAMES, the manager, and further particulars obtained from the undersigned. By order of the Liquidators, WM. BECKWITH.

Bank Chambers, Douglas, 1st April, 1870.

TO PROMOTERS OF PUBLIC COMPANIES, AND OTHERS.

FOR SALE, a VALUABLE MINING PROPERTY, situated west of ALLT-Y-CRIB MINE, TALYBONT, CARDIGANSHIRE, about six miles from the town of Aberystwith, and close to the Cambrian Railway. Several strong and rich lodes have already been discovered on the surface of the property. The Mine is at present worked by a private company, whose means are not equal for the proper development of the property.

Further particulars may be obtained on applying to Mr. JOHN HORRENDGE, Pentre Bach, Tal-y-Bont, via Glandovey.

THE VAN LEAD MINE, LLANIDLOES.

TO BE LET OR SOLD, the most IMPORTANT MINERAL and FARMING PROPERTY, called

SOFL CEIRCH,

Adjoining the famous VAN LEAD MINE on the north-west, one field being in the Van Mountain. The Van Company are now opening on a lode near this field. Sofl Ceirch Estate, having exchanged hands, brings to market this most important mineral property.

The family of the present tenant have lived upon the farm 160 years, and have from time to time turned up large lumps of lead from the back of the lode in course of ploughing; and, fearing they would lose their farm, never named it. The property is freehold.

Application to be made to JOSEPH JUKES, Esq., Birkenhead, the proprietor; or to Mr. CHARLES D. BUTT, No. 2, Brunswick-street, Liverpool.

PRELIMINARY NOTICE.

TO COAL AND IRON MASTERS AND CAPITALISTS.

VALUABLE COLLIERIES and ESTATES, comprising nearly SIX HUNDRED ACRES in NORTH STAFFORDSHIRE.

MESSRS. JOSEPH COOKSEY AND SON, of Westbromwich, in the county of Stafford, Auctioneers, are authorised to announce that they WILL OFFER FOR SALE, BY PUBLIC AUCTION, under the direction of the Court of Chancery, in the course of the ensuing spring, in one or more Lots, and at the time and place, particulars of which will be duly announced, the extensive

FREEHOLD AND LEASEHOLD COLLIERIES AND ESTATES

Of HUGH HENSHALL WILLIAMSON, Esq., deceased, late of Greenway Bank, in the county of Stafford, situate at PINNOX and CHELL, in the parishes of BURSLEM and WOLSTANTON, in the said county of STAFFORD.

The estates consist of about 483 acres of freehold land, with the mines under same, and about 23 acres of freehold mines, without the surface, also wharves, offices, two managers' houses, farm buildings, smiths' forges, workshops, foundry, and about 100 workmen's cottages, together with two powerful pumping-engines, numerous winding-engines, and other colliery plant; also the various seams of coal and ironstone under about 53 acres of land, adjoining the freehold estates, held under lease for a term of which 36 years will be unexpired in June, 1870, together with the pumping and winding-engines, and other plant erected thereon.

The mines include all the principal seams of coal and ironstone in the North Staffordshire coal field.

The colliery is now in full operation, and doing a large business; and as a great extent of level driving and other dead work has been recently executed, the output may be very much increased.

The situation is in close proximity to the populous manufacturing towns of Burslem and Tunstall, and within a short distance of the Trent and Mersey Canal and the main line of the North Staffordshire Railway.

The colliery is traversed by a private locomotive railway, by which, at a small expense, the produce of the mines is conveyed to a wharf adjoining the main street of the town of Tunstall.

There is another wharf belonging to the estate on the Trent and Mersey Canal, from which coal and ironstone are shipped in large quantities to South Staffordshire and elsewhere.

The estate affords several convenient sites for the erection of blast furnaces and iron works, and contains an ample supply of excellent ironstone, as well as coal suitable for the manufacture of iron.

For further particulars apply to Messrs. JOSEPH COOKSEY and SON, auctioneers and mining engineers, Westbromwich; Mr. JOHN BUTTERFIELD, Hoston Mills, near Tunstall; Mr. ELIAS DONNING, C.E., 41, John Dalton-street, Manchester; JOHN LANCASTER, Esq., Iuce Hall, Wigan, and Bilton Grange, Rugby; Messrs. SLATER, HEELIS, and CO., solicitors, Manchester; Messrs. BROCKLEHURST and WRIGHT, solicitors, Macclesfield; Messrs. BLAKE and TRAFFORD, solicitors, Northwich; Messrs. WEDLAKE and LETTS, 3, Mitre-court, Temple, London, E.C.; or to Messrs. KEARY and SON, solicitors, Stoke-upon-Trent.

CLOUGH COLLIERIES, COUNTY KILKENNY.

TO MINING COMPANIES, CAPITALISTS, AND OTHERS.

THE above VALUABLE ANTHRACITE COAL MINES, known as the CLOUGH COLLIERIES, situate on the north mearing of the county Kilkenny with the Queen's county, will be LET, ON LEASE, on most advantageous terms. They are within a moderate distance of the railways at Kilkenny, Ballyragget, Carlow, Athy, Maryborough, Abbeyleix, and other stations, and of the Barrow and Grand Canal Navigations at Carlow and Athy.

There is a constant demand for the produce of the mines, which will be largely increased by steadiness in the supply, and eventually the application of it to railway and steam ship purposes.

The Great Southern and Western Railway have for some time been using large quantities of anthracite coal, delivered at Athy. The royalty extends under more than 2200 statute acres of the townlands of Clough and Chatsworth, or Aughatubrid, the property of George Bryan, Esq., M.P.

All the coal seams wrought in the vicinity are contained in the royalty. The Three Feet or Old Kilkenny Seam, the Four Feet or Jarrow Seam, and the Rusk or Two Feet Seam. A pumping engine, horse whim, weighbridge, &c., which have been erected at the Broompark, on the latter seam, can be had at a valuation. The workings are well laid out, are in good order, with railways, &c., and with a trifling outlay that concern can be put to work in a short time. Abundance of fire-clay, of very superior quality, accompanies the Three Feet Seam and Rusk Seam, and ironstone is to be found with all the seams. Brick clay abounds, and water power for any purpose is available. So favourable an opportunity for the remunerative application of capital to the development of one of Ireland's great resources is seldom to be met with.

Proposals will be received, and full particulars given, on application to PATRICK FENLON, Esq., Clough Collieries, Castlecomer, County Kilkenny, who will assist in any examination of the mines; WILLIAM LEWIS, Solicitor, 50, Dawson-street, Dublin; or to JAMES BARRON KENNEDY, Solicitor, Mountjoy-square, Dublin.—March 23, 1870.

TO BE LET, a VALUABLE COAL FIELD, in NOTTINGHAMSHIRE, containing between TWO THOUSAND and THREE THOUSAND ACRES of the TOP HARD SEAM of COAL.
Apply to Mr. T. W. JEFFCOCK, 18, Bank-street, Sheffield.

NORTH WALES.

FOR SALE, BY PRIVATE CONTRACT, part of a most VALUABLE SLATE AND SLAB PROPERTY, held on lease for a term of 40 years, from March, 1863, at 1-16th royalty.

The property advertised is a counterpart of a slate and slab range now in work, the merits of which will bear the fullest investigation.

Both the slab and slate veins are unusually thick, and require, comparatively, but small capital to return large profits.

The property has the advantage of a splendid water power, and a tramway passes through the sett to the shipping port—distance about six miles.

Full particulars can be had by applying, by letter, to "Box C 31," Post Office, Liverpool; or to—
Mr. JOSEPH KELLOW, Quarry Engineer, 2, Park-terrace, Port Madoc, North Wales.

VALUABLE CORNISH MINING MACHINERY.

MESSRS. J. C. LANYON AND SON have FOR SALE a very superior lot of the above, including—
80, 60, 50, 30, and 24 inch PUMPING ENGINES;
24 inch ROTARY ENGINE, with CAPSTAN;
22 inch ditto, with CAPSTAN and CRUSHER;
Several good BOILERS;
A large assortment of PITWORK of all sizes; STRAPPING PLATES, rolled and faggoted, all of which are secondhand, in good condition, and will be sold on very reasonable terms.
For particulars, apply to—
LANYON AND SON, MERCHANTS, REDRUTH.
Dated Redruth, Feb. 23, 1870.

SOUTH EXMOUTH MINE, HENNOCK, DEVON.

FOR SALE, BY PRIVATE CONTRACT, the following, viz.:—
40 in. cylinder PUMPING ENGINE.
25 in. cylinder WHIM ENGINE, with CRUSHER attached.
60 fms. 11 and 12 in. PUMPS in shaft.
30 fms. 11 and 12 in. PUMPS at surface.
Timber, and various useful mining materials.
Apply to Capt. JOHN CORNISH, Frank Mills Mine, Christow; or to Mr. J. O. HARRIS, Public Accountant, 2, Gandy-street, Exeter.

FOR SALE, BY PRIVATE CONTRACT, at PAR CONSOLS MINE, near Par Station, CORNWALL,

EIGHT STEAM ENGINES,

Including ONE 80 in. (with BOILERS), for pumping, stamping, and drawing purposes; THREE HUNDRED PUMPS, from 6 in. to 20 in.; H and doorpieces; hammered iron rod plates; rail, scrap, and cast iron; with a large quantity of useful MINING MATERIALS.

For particulars, apply to Capt. PUCKEY, at the counting-house.

PERRAN FOUNDRY, CORNWALL.

ENGINES AND MINING MACHINERY FOR SALE:—
ONE 36 in. PUMPING ENGINE, secondhand.
ONE 30 in. PUMPING ENGINE, secondhand.
ONE 11 in. HORIZONTAL HIGH-PRESSURE ENGINE, new.
ONE 8 in. HORIZONTAL HIGH-PRESSURE ENGINE, new.
BOILERS for the above.
A large assortment of new and secondhand PITWORK in stock, of all sizes at moderate prices. WILLIAMS' PERRAN FOUNDRY COMPANY.
Dated 14th December, 1869.

FOR SALE,—THE UNDERMENTIONED ENGINES:—
ONE 50 in. cylinder PUMPING ENGINE, with ONE BOILER.
ONE 30 in. cylinder ROTARY STEAM ENGINE, 7 ft. stroke, with or without BOILER, wrought iron fly-wheel shaft, and 10 ton fly-wheel; 12 heads of stamps connected.
ONE 30 in. cylinder PUMPING ENGINE, 9 ft. and 8 ft. stroke, with or without BOILER.
ONE 12 in. cylinder ROTARY STEAM ENGINE, with ONE 6 ton BOILER.
THREE Cornish BOILERS, from 10 to 12 tons each, in excellent condition.
Also, several Cornish CRUSHERS, of various sizes.
For further information, apply to—
W. MATHEWS, ENGINEER, TAVISTOCK.
Tavistock, April 13th, 1870.

FOR SALE (a bargain), a GOOD SECONDHAND PORTABLE 16 horse power vertical combined STEAM ENGINE and BOILER, with wrought iron connecting rod, crank, and crank shaft; heavy fly wheel, with wrought iron arms, feed pump, governors, &c., complete, in good working order, and ready for immediate delivery.
Apply to Mr. A. C. BELL, C.E., 7, Great Winchester-street-buildings, E.C.

FOR SALE, cheap, several FIRST-CLASS NEW PORTABLE STEAM ENGINES, with all recent improvements, and guaranteed; 9-horse power, 12-horse power, and 25-horse power, ready for delivery.
Superior PIT WINDING GEAR supplied at a short notice, suitable for Portable Engines.
FOR SALE, an excellent SECONDHAND PORTABLE STEAM ENGINE, with a NEW MORTAR MILL.
Apply to—
BARROWS AND STEWART, ENGINEERS, BANBURY.

RAILWAY WAGON WORKS, BARNSLEY.

MESSRS. G. W. AND T. CRAIK
ARE PREPARED TO
SUPPLY COAL AND COKE WAGONS
OF EVERY DESCRIPTION,
Either for cash, or by deferred payments through wagon-leasing companies

WAGONS PROMPTLY REPAIRED.

THE BEVERLEY IRON AND WAGGON COMPANY,
LIMITED,

MANUFACTURERS of RAILWAY WAGGONS, WHEELS and AXLES, CARTS, LORRIES, WOOD WHEELS, PATENT WROUGHT IRON WHEELS and AXLES, BARROWS, PUMPS, DOUBLE PURCHASE CRABS, &c., &c.
IRON WORKS—BEVERLEY, YORKSHIRE.
Catalogues free by post.

MARTIN'S PATENT PISTON,
FOR STEAM AND OTHER ENGINES,
Effecting a SAVING of FIFTEEN PER CENT. IN FUEL, with TEN PER CENT. ADDITIONAL POWER.

Address,—
MESSRS. WILLIAMS AND BOLTON,
ST. HELEN'S FOUNDRY,
(Patent Piston) SWANSEA.

PISTONS, AND AIR-PUMP BUCKETS,
FITTED WITH
"PATENT ELASTIC METALLIC PACKING,"
Of which above FIVE THOUSAND have been made by
MESSRS. MATHER AND PLATT,
SALFORD IRONWORKS, MANCHESTER.

WARTON NATIVE OXIDE OF IRON
IS SUPERIOR TO ANY OTHER PAINT IN
BODY AND BRILLIANCY OF COLOUR,
AND, UNLIKE LEAD PIGMENTS,
IS INNOCUOUS TO THE WORKMEN USING IT.
Prices may be obtained on application to the agents,—
H. J. WALDUCK AND CO.,
No. 1, MARKET STREET, MANCHESTER.

MACHINERY FOR MINES AND SLATE QUARRIES.
SAWING, PLANING, DRESSING, AND ROCK-BORING MACHINES FOR SLATE.
WATER BALANCES, WATER WHEELS, WINDING AND PUMPING MACHINERY; and PLANT of every description for MINES or QUARRIES.
STEAM ENGINES—STATIONARY, MARINE, or LOCOMOTIVE.
BOILERS AND GIRDER WORK.
SHAFTING, PULLEYS, AND GENERAL MILLWORK.
MACHINERY AND GENERAL CASTINGS.
SPUR and BEVEL WHEELS of any diameter or pitch moulded by machinery.
DE WINTON AND CO.,
UNION IRON WORKS, CARNARVON.

ESTABLISHED MORE THAN HALF A CENTURY.

THE TAVISTOCK FOUNDRY, IRONWORKS AND HAMMER MILLS,
which have been carried on for more than half a century by
MESSRS. GILL AND CO.,
and obtained a
HIGH REPUTATION FOR
SHOVELS AND OTHER TOOLS
as well as for
ENGINEERING AND FOUNDRY WORK
have been purchased by
MESSRS. NICHOLLS, MATHEWS, AND CO.,
BEDFORD IRONWORKS, TAVISTOCK.

For thirty years Messrs. NICHOLLS, MATHEWS, and Co., have been the proprietors of the latter works, but have now removed to the

TAVISTOCK FOUNDRY,

where, having the advantage of a never-failing stream of water of upwards of 200-horse power, they will have increased facilities for speedily and satisfactorily executing all orders entrusted to their care.

Manufacturers of STEAM ENGINES and BOILERS, on the newest principle pump work, brass and iron; hammered iron shafts, of all sizes; miners' steel and iron tools.

N., M., AND Co. have had a LARGE EXPERIENCE in PREPARING MACHINERY for FOREIGN MINES, as well as selecting competent mechanics to erect the same.

N., M., AND Co. have always a LARGE STOCK of SECOND HAND MATERIALS.

BRICK MOULDING MACHINES
On the best principle.
Will make upwards of 2000 bricks per hour from Dry Clay, Shale, or Slate Clay
APPLY TO THE MAKERS,
BUCK AND WATKIN,
ENGINEERS AND MACHINE TOOL MAKERS,
WELL LANE, HALIFAX.

JOHN HORSLEY,
IRON AND METAL AGENT,
ST. ANN'S SQUARE, MANCHESTER.

Permanent, Contractors, and Colliery Rails, in Steel or Iron. Wrought-iron or Steel Weldless Locomotive Carriage and Wagon Tyres. Iron and Steel Straight and Cranked Axles, Wheels and Axles, Railway Chairs, Fish Plates, Bolts and Nuts, Spikes, Cranes, Jacks, Rivets, Hurdles, and Chains. Black or Galvanised Telegraph Wires, Fencing Wire. Black Oiled, and Galvanised Corrugated Sheets. Rolled Iron Joints, Wrought-iron Girders, Roofs, Bridges, Tanks, Boilers, &c. Boat Girder, Tank Bridge and Boiler Plates.
Angle, Tee, and Girder Iron, Nail Rods, Tin Plates, Hoops, Sheets, Lead, Copper, Tin, Zinc, and Spelter.
Hot and Cold Blast Pig Iron, &c., &c.

PATENT SELF-REGISTRATION COLLIERY WINDING INDICATOR.

THIS INDICATOR, in addition to its ordinary use, INDICATES and REGISTERS the NUMBER of WINDINGS, thus enabling the Manager to check at a glance the returns of the Banksman or Clerk.
PEPPER MILL BRASS FOUNDRY COMPANY,
DARLINGTON STREET, WIGAN,
MAKERS.

THE PATENT SELF-ACTING MINERAL DRESSING MACHINE COMPANY (LIMITED).

THE PATENT JIGGING MACHINE COMPANY.

T. CURRIE GREGORY, MINING ENGINEER.
OFFICES,—62, ST. VINCENT STREET, GLASGOW.

These companies possess the patents for the most approved machinery for all the processes of dressing ores, whereby a very great saving in cost is effected.
The machinery is in successful operation at several mines in the kingdom, and is in increasing demand.
Mr. GREGORY, in connection with skilled engineers in various mining districts, has paid for the last two years special attention to this important department of mining, and it is only now, the process being in successful operation, that the attention of the public is called thereto.
Mr. GREGORY will be pleased to answer all enquiries, and give orders for inspection. He is prepared to give designs and estimates for the supply of machinery, and for the laying out of floors.

THE IRON AND COAL TRADES' REVIEW:
ROYAL EXCHANGE, MIDDLESBOROUGH.
The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general.
Offices of the Review:—Middlesborough-on-Tees (Royal Exchange); London (11 and 12, Red Lion-court, Fleet-street); Newcastle-on-Tyne (50, Grey-street).

THE HOWARD SAFETY BOILER.

Made entirely of WROUGHT-IRON TUBES, and other improvements, adapting it for MARINE, STATIONARY, and PORTABLE ENGINES.
THESE BOILERS ARE NOW WORKING SUCCESSFULLY IN ALL PARTS OF THE WORLD.
One Firm in the North of England, who had a 50-horse power Boiler in 1868, has since purchased over twenty others.

Patentees and Manufacturers: J. and F. HOWARD, Britannia Iron Works, Bedford.
LONDON OFFICE: 4, CHEAPSIDE (three doors from St. Paul's).

OSLER'S CRYSTAL GLASS CHANDELIERS,
WALL LIGHTS and LUSTRES for GAS and CANDLES.
CHANDELIERS IN BRONZE AND ORMULU.
MODERATOR LAMPS, AND LAMPS FOR INDIA.
TABLE GLASS of all kinds. ORNAMENTAL GLASS, English and Foreign.
Mess, Export, and Furnishing Orders promptly executed.
All articles marked in plain figures.
LONDON: Show Rooms, 45, Oxford-street, W.
BIRMINGHAM: Manufactory and Show Rooms, Broad-street.
Established 1807.

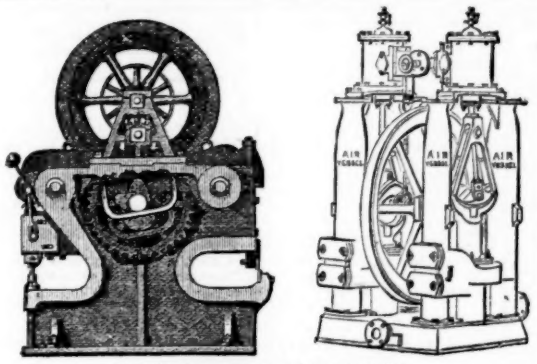
HENRY VORLEY,
IMPORTER AND REFINER OF
OILS, TALLOW, GREASE, AND TAR.
WHOLESALE DEALER IN
Cotton Waste, Lamp Cottons, Steam Cement, Colours, Paints, and General Colliery and Engineers' Stores.
MAKER OF "THE 'REGISTERED' DOUBLE-REFINED MACHINE OIL,"
For Engines, Lathes, Planing Machines, &c.
AND THE IMPROVED BROWN CORVE OIL FOR COLLIERIES
BRAMALL LANE, SHEFFIELD.

A SAVING OF ABOUT FIFTY PER CENT.
Is effected by the use of the PATENT DON LUBRICATING OIL.

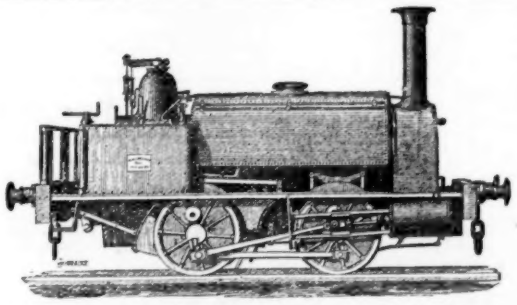
ECONOMIC LUBRICATING — THE DON — OIL.

In place of OLIVE and other kinds ordinarily used on STATIONARY, LOCOMOTIVE, MARINE ENGINES, and MACHINERY of all kinds, and the undersigned are so satisfied of the correctness of this statement, that they are willing, at their own risk, to forward a cask of about 30 gallons for trial to any respectable person or company, on the understanding that it may be returned in a month if it should not answer, when payment would not be required, except for the quantity used.
There are two kinds,—the medium for engines and heavy bearings, and the light for spindles and light work. This oil will lubricate as well, and lasts as long, as olive, neats'-foot, and other expensive kinds, and is superior to rape, which is fully 50 per cent. dearer.
It never "CLOGS," nor leaves any "GUMMY" deposit upon the bearings, which, therefore, never require cleaning or scraping, whereby much time, labour, and expense are saved. It is in use and approved of by the majority of the iron and coal companies in West Lancashire, where it was first introduced but a few months ago, also by several ocean steamer and ferry proprietors on the Mersey and elsewhere.
Printed particulars and testimonials sent, post free, to any address.

DUNCAN BROTHERS, 17, Unity-buildings, Lord-street, Liverpool.



JOHN CAMERON,
MAKER OF
STEAM PUMPS, PORTABLE ENGINES, PLATE BENDING ROLLERS, BAR AND ANGLE IRON SHEARS, PUNCHING AND SHEARING MACHINES, PATENTEE OF THE DOUBLE CAM LEVER PUNCHING MACHINE, BAR SHEARS, AND RAIL PUNCHING MACHINES,
EGERTON STREET IRON WORKS,
HULME, MANCHESTER.



TANK LOCOMOTIVES,
FOR SALE OR HIRE.
HENRY HUGHES AND CO.
LOUGHBOROUGH.

BRITISH, COLONIAL, AND FOREIGN PATENTS, REGISTRATION OF DESIGNS, COPYRIGHTS, TECHNICAL TRANSLATIONS, DRAWINGS, &c.
MICHAEL HENRY,
Mem. Soc. Arts, Assoc. Soc. Engineers, Compiler of the "Inventors' Almanac," and the Author of the "Defence of the Present Patent Law,"
PATENT REGISTRATION AND COPYRIGHT AGENT AND ADVISER.
Mr. HENRY has had especial experience in technical French, and in French Manufacturing and Commercial Matters.
Inventors advised in relation to Patents and Inventive and Industrial Matters. Printed information sent free by post. Specifications drawn and revised, searches conducted. Abstracts, Cases, and Opinions drawn.
Offices, 68, Fleet-street, E.C., London, corner of and entrance in Whitefriars Street.

BICKFORD'S PATENT SAFETY FUSE,
FOR CONVEYING FIRE TO THE
CHARGE IN BLASTING ROCKS, &c.
Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; at the "UNIVERSAL EXPOSITION," in Paris, 1867; and at the "GREAT INDUSTRIAL EXHIBITION," at Altona, in 1869.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—
EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

THE CORNWALL BLASTING POWDER COMPANY,
ST. ALLEN MILLS, TRURO,
Beg to call attention to their WARRANTED WATERPROOF SAFETY BLASTING CARTRIDGES, adapted for SUBMARINE BLASTING and USE IN WET GROUND GENERALLY.
Prices and samples on application.

PATENT ATMOSPHERIC STAMPS,
MANUFACTURED BY
HARVEY AND CO., HAYLE, CORNWALL.
The result of two months' trial of this battery shows that from six to seven tons of ore can be pulverised by each head in twenty-four hours.
The price, and other particulars, can be obtained on application to—
HARVEY AND CO.
SECONDHAND ENGINES and MINING MACHINERY, of all sizes, on hand.
Hayle, March 10, 1870.

THOMAS TURTON AND SONS,
MANUFACTURERS OF
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GWYNNE AND CO., ENGINEERS,

ESSEX STREET WORKS, STRAND, LONDON, W.C.

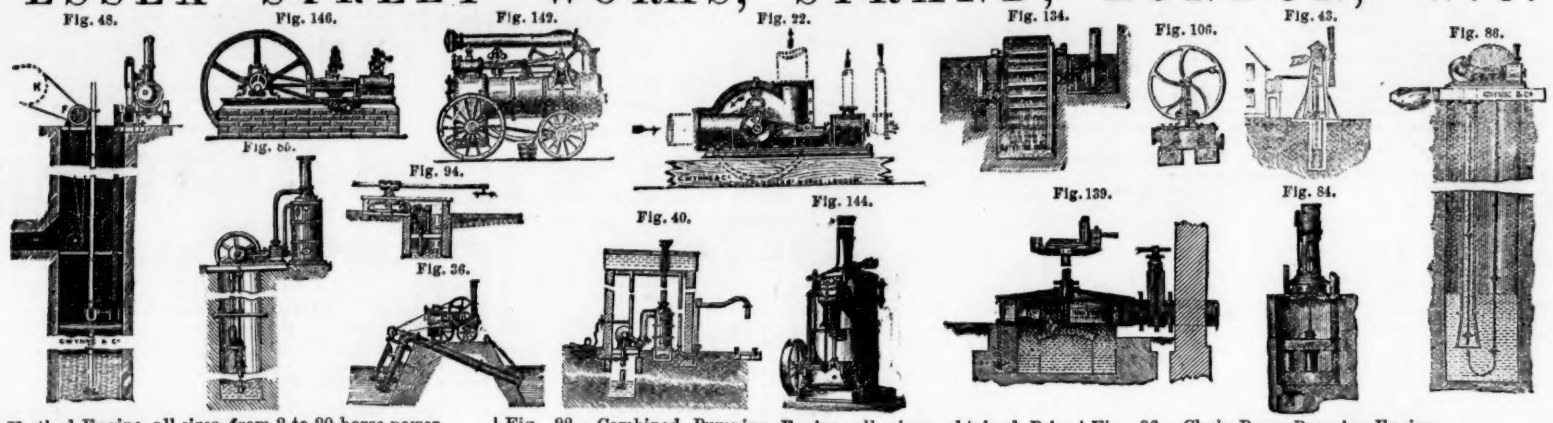

Fig. 144.—Vertical Engine, all sizes, from 2 to 20-horse power.
Fig. 146.—Horizontal Engine, from 4 to 100-horse power.
Fig. 142.—Portable Engine, from 2½ to 30-horse power.
Fig. 40.—Gwynne and Co.'s Combined Stationary Pumping Engine.
Fig. 139.—Turbine Water-wheel, from 1 to 300-horse power.
Fig. 22.—Combined Pumping Engine, all sizes, obtained Prize Medal, Paris Exhibition.
Fig. 85.—Deep Well Pumping Engine, all sizes.
Fig. 134.—Water-wheel Pumping Machinery.
Fig. 36.—Gwynne and Co.'s Patent Syphon Drainage Machinery.
Fig. 95.—Horse-power Pumping Machinery.
Fig. 86.—Chain Pump Pumping Engine.
Fig. 48.—Deep Mine Centrifugal Pumping Machinery.
Fig. 84.—Double-acting Vertical Pumping Engine.
Fig. 106.—Gwynne and Co.'s Improved Plunger Hand Pump.
Fig. 43.—Wind Power Pumping Machinery.

Steam Engines of all kinds and sizes, Hand and Steam Fire Engines, Water Wheels, Hydraulic Lifts, Cranes and Jacks, Steam and Water Valves, Hydraulic Presses, Sheep Washing Machinery, &c., &c.

List of Centrifugal Pumps, two stamps. Illustrated Catalogues of Pumping Machinery, six stamps. Large Illustrated Catalogue, with many Estimates, &c., twelve stamps. All post free. GWYNNE and Co. have recently effected a considerable reduction in their prices, being determined to supply not only *the best* but *the cheapest* Pumping Machinery in the world.

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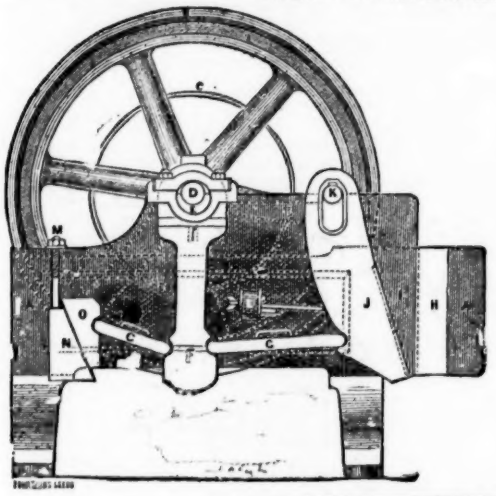
It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaws about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. —— THOS. GOLDSWORTHY & SONS.

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Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes for fine road metal, free from dust. Messrs. ORD and MADDISON,
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Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
JOHN LANCASTER.

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MEADOW LANE, LEEDS,
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THE PATENT
VILLEPIGUE PERFORATOR.

This Machine, for the purpose of Boring in Rock, Slate, Shale, Coal, and other Minerals, possesses EXCLUSIVELY the following combined advantages:—

1.—EXTREME PORTABILITY. It can be carried, set up, worked, and taken down by one man.
2.—IT BORES a HOLE OF ANY DIAMETER up to 3½ inches in any direction; and it can be set up in any required position.
3.—RATE OF WORK.—In Coal Measures, or Portland Stone, 2 to 3 inches per minute; Sandstones and Slates, 3 to 4 inches per minute; Coal and Shale, from 30 to 60 inches per minute.

PRICE, FROM FIFTEEN GUINEAS, COMPLETE.

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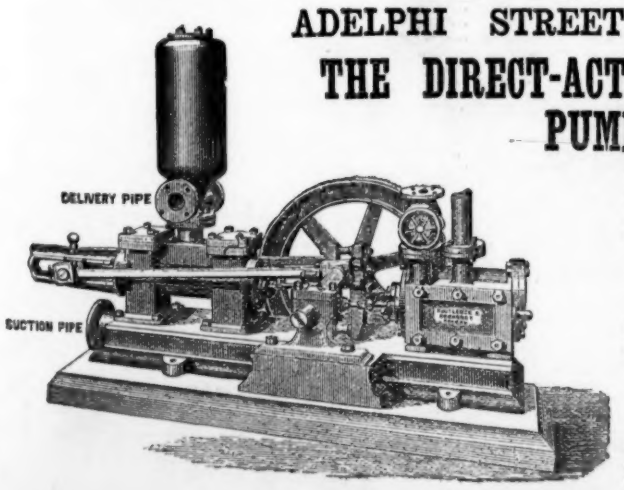
THE DIRECT-ACTING DOUBLE HORIZONTAL PUMPING ENGINE.



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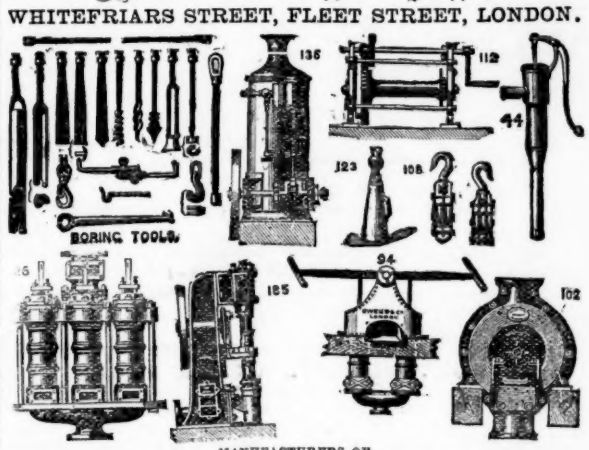

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No. 136.—Vertical and other Portable Steam-engines.
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By a special method of preparation, this leather is made solid, perfectly close in texture, and impermeable to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be made. It may be had of all dealers in leather, and of

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		10 6 8	0 5 0	Jan. 1869
200	Botallack, t, c, St. Just	91 5 0	230	220 230	565 5 0	5 0 0	Feb. 1870
12000	Bronfloyd, l, Cardigan*	1 0 0	4⅜	4 4¼	1 3 1	0 1 6	Jan. 1870
5094	Bwlch Consols, s-l, Cardigan	4 0 0	4	3½ 3¾	0 7 0	0 2 0	Jan. 1870
6400	Cashwell, l, Cumberland*	2 10 0	—		0 9 0	0 2 6	Dec. 1869
916	Cargoll, s-l, Newlyn	15 5 7	5	5 7	16 15 0	0 10 0	Aug. 1869
1280	Chanticleer, l, Flint	0 7 8	—		0 1 0	0 0 6	Nov. 1868
2450	Cook's Kitchen, c, Illogan‡	19 14 9	14	15 15½	3 5 6	0 6 0	Jan. 1870
1000	Cornwall Hematite*	10 0 0	—		0 10 0	0 10 0	Feb. 1870
509	Creegbrawse and Penkevil, t	—	—		2 5 0	1 5 0	April 1868
867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		31 18 0	0 5 0	Apr. 1870
128	Cwmystwith, l, Cardiganshire	60 0 0	—		387 10 0	2 0 0	July 1869
280	Derwent Mines, s-l, Durham	300 0 0	—		177 0 0	2 10 0	July 1868
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	110	90 100	1141 0 0	4 0 0	Jan. 1870
656	Ding Dong, t, Gulval‡	49 14 6	18	17 19	6 0 0	1 0 0	Dec. 1869
1432	Dolcoath, c, t, Camborne	32 4 6	130	132½ 135	238 12 6	3 0 0	Apr. 1870
12800	Drake Walls, t, Calstock‡	2 10 0	1⅛	1¼ 1⅜	1 1 0	0 1 0	Jan. 1870
6144	East Caradon, c, St. Cleer†	2 14 6	5½	4¼ 4¾	14 11 6	0 2 0	July 1869
300	East Darren, l, Cardiganshire	32 0 0	—		182 10 0	2 0 0	Feb. 1870
6400	East Pool, t, c, Pool, Illogan	0 9 9	7	7 7¼	9 19 3	0 3 3	Mar. 1870
1906	East Wheal Lovell, t, Wendron	3 9 0	27	25 26	10 16 0	2 0 0	Apr. 1870
2800	Foxdale, l, Isle of Man*	25 0 0	—		75 5 0	0 10 0	Mar. 1870
5000	Frank Mills, l, Christow	3 18 6	—		4 1 6	0 4 0	Nov. 1869
3950	Gawton, c, Tavistock	3 10 6	—		0 3 0	0 3 0	Jan. 1868
15000	Great Laxey, l, Isle of Man*	4 0 0	18	18 18½	12 3 0	0 10 0	Mar. 1870
3000	Great Northern Manganese*	5 0 0	—		—	5 p.ct.	Feb. 1869
5908	Great Wheal Vor, t, c, Helston†	40 0 0	12	11½ 12½	15 8 6	0 2 6	Mar. 1870
1024	Herodsfoot, l, near Liskeard†	8 10 0	42	43 45	52 10 0	1 10 0	Feb. 1870
12000	Holmbush and Kelly Bray, c*	1 0 0	—		0 3 0	0 1 0	Nov. 1869
5000	Ironmasters' Company*	10 0 0	—		0 9 0	0 9 0	Feb. 1870
10000	Killaloe, sl, Tipperary	1 0 0	⅞	¾ ⅞	0 7 0	6 p.ct.	Mar. 1870
165	Levant, c, t, St. Just	10 8 1	—		1101 0 0	2 0 0	Aug. 1869
400	Lisburne, l, Cardiganshire	18 15 0	—		529 0 0	2 0 0	Jan. 1870
3000	Maes-y-Safn, l, Flint*	20 0 0	—		4 0 0	0 5 0	Oct. 1868
9000	Marke Valley, c, Caradon	4 10 6	7	6⅞ 7⅛	6 1 0	0 4 0	Apr. 1870
1800	Minera Mining Co. l, Wrexham*	25 0 0	—	165 175	268 3 3	5 0 0	Feb. 1870
20000	Mining Co. of Ireland, c, l, cl.	7 0 0	8½	8¼	—	1¾ p.c.	Jan. 1870
40000	Mwyndy Iron Ore*†	3 10 0	1½	1 1⅛	0 16 6	0 5 0	Jan. 1870
2000	North Levant, t, c, St. Just	10 12 0	11		1 5 0	0 10 0	Mar. 1870
200	Parys Mines, c, Anglesey*	50 0 0	—		162 10 0	2 10 0	Aug. 1868
5000	Penhalls, t, St. Agnes	3 0 0	6½	6¼ 6½	1 0 6	0 5 0	Jan. 1870
400	Phœnix, t, c, Linkinhorne	50 0 0	—		230 15 0	6 0 0	Jan. 1870
12800	Prince of Wales, c, Calstock	0 12 6	⅞	¾ ⅞	0 10 6	0 1 0	Nov. 1869
1120	Providence, t, Uny Lelant†	10 6 7	40	38 40	97 2 6	1 10 0	Mar. 1870
512	South Caradon, c, St. Cleer†	1 5 0	310	300 310	642 10 0	5 0 0	Mar. 1870
6000	South Darren, l, Cardigan*	3 6 6	1¾		1 0 0	0 2 6	Nov. 1869
937	South Wh. Crofty, c, Illogan	24 10 10	9½	9½ 10	2 10 0	0 10 0	Sept. 1869
496	So. Wh. Frances, c, Illog.†‡	18 18 9	9	8 9	374 13 6	1 0 0	Mar. 1868
242	Spearn Moor, t, St. Just	36 17 9	18		12 15 0	1 0 0	Feb. 1870
940	St. Ives Consols, t, St. Ives‡	10 15 0	10	9 10	0 10 0	0 10 0	May 1869
8771	St. Just Amalgamated, t*	3 10 0	—		0 2 6	0 2 6	Nov. 1869
508	Summer Hill, l, Mold	3 18 6	—		2 5 6	0 5 0	Feb. 1868
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	27	30 31	23 1 0	1 0 0	Feb. 1870
2000	Trumpet Cons., t, Helston	11 10 0	24	24½ 25	10 2 0	0 14 0	Nov. 1869
12000	Van, l, Llanidloes*	4 5 0	80	75 80	1 10 0	0 10 0	Mar. 1870
3000	W. Chiverton, l, Perranzabuloe†	10 0 0	57	54 56	41 7 6	2 0 0	Feb. 1870
5000	West Godolphin, t, c, Breage	0 1 0	—		0 3 0	0 1 0	July 1869
2582	West Great Work, t, Breage	5 11 0	—		0 2 0	0 2 0	June 1869
512	West Wheal Frances, t, Illogan	106 15 0	39	37½ 38½	4 10 0	1 10 0	Oct. 1869
400	W. Wheal Seton, c, Camborne†	47 0 0	130	135 145	656 0 0	4 0 0	Apr. 1870
512	Wheal Basset, c, Illogan†	5 2 6	—	55 65	632 10 0	1 0 0	June 1868
512	Wheal Jane, s-l, Kea	10 15 0	45	44 45	30 10 0	1 10 0	Apr. 1870
4295	Wheal Kitty, t, St. Agnes	5 4 6	6½	6½ 6¾	4 13 0	0 5 0	Feb. 1870
1024	Wheal Kitty, t, Uny Lelant†	3 10 6	13	12½ 13½	12 2 6	0 15 0	Jan. 1870
896	Wheal Margaret, t, Uny Lelant‡	13 17 6	9	7 8	77 5 0	0 10 0	Nov. 1869
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	14	12½ 13½	70 7 6	0 10 0	Mar. 1870
1000	Wh. Mary Hutchins, Plymp., t	2 12 6	—		0 10 0	0 5 0	Aug. 1869
80	Wheal Owles, t, St. Just‡	70 0 0	—		429 13 0	5 0 0	Nov. 1869
396	Wheal Seton, t, c, Camborne	58 10 0	30	25 27½	254 15 0	2 0 0	Feb. 1869
17000	Wicklow, c, t, Wicklow	2 10 0	7¾	8 8⅛	50 3 0	0 5 0	Sept. 1869

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
35000	Alamillos, l, Spain*†	2 0 0	2	1¾ 2	0 10 6	0 2 0	Mar. 1870
20000	Australian, c, South Australia†‡	7 7 6	—		0 1 6	0 0 6	Aug. 1868
15000	Cape Copper Mining*†	7 0 0	20	18½ 19½	5 7 6	0 15 0	Mar. 1870
30000	Central American Association*†	0 10 0	—		0 6 0	0 1 0	July 1869
10000	Copiapo Mining Co., Chili†‡	16 10 0	3	2 3	0 4 0	0 4 0	April 1869
76162	Don Pedro North del Rey*†‡	0 14 0	5	4⅝ 4⅞	1 14 3	0 4 0	Mar. 1870
70000	English and Australian, c‡	2 10 0	—		—	0 0 9	Feb. 1869
25000	Fortuna, l, Spain*†	2 0 0	3¼	3⅛ 3⅜	2 0 10	0 3 0	Mar. 1870
20000	Gen Mining Assoc, Nova Scotia*†	20 0 0	7	5 7	23 10 0	0 15 0	June 1867
10000	Gonnesa, l, Sardinia*	5 0 0	—		10 per cent.		Aug. 1868
68000	Kapunda Mining Co., Austral‡	1 0 0	¼	⅛ ⅜	0 1 10	0 0 6	Nov. 1868
15000	Linares, l, Spain*†	3 0 0	4¼	3¾ 4¼	12 8 4	0 5 0	Mar. 1870
50000	Panulcillo, c, Chili*†	4 0 0	1¾	1¾ 2¼	10 per cent.		Yearly.
10000	Pontgibaud, s-l, France†	20 0 0	14	15 17	7 1 8	1 15 6	Nov. 1869
100000	Port Phillip, g, Clunes*†	1 0 0	¾	⅝ ⅞	1 6 0	0 1 6	Jan. 1870
120000	Scottish Australian Min. Co.†	1 0 0	⅞	⅝ ⅞	6 per cent.		Nov. 1869
11000	St. John del Rey, Brazil*†	15 0 0	22	20 22	81 10 0	4 5 0	Dec. 1867
4000	Swedish Sulphur Ore*	2 10 0	—		7½ per cent.		Dec. 1868
13500	Vancouver Coal Mining*†‡	6 0 0	8½	7½ 8	3 3 6	0 9 0	Nov. 1869
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 7	0 0 7	July 1868
40000	West Canada Mining Co.*	1 0 0	—		0 19 6	0 2 6	May 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
130000	Almada and Tirito Consolidated, s, Mexico*	0 10 0	—	½ ⅝	Mar. 1870
50000	Anglo-Argentine, g, s, Argentine Republic*	1 0 0	1	1 1¼	Fully pd.
20000	Anglo-Australian, g, Victoria*	1 0 0	1⅛		Jan. 1870
100000	Anglo-Brazilian, g*†	0 11 0	⅛	⅜ ½	Nov. 1866
12500	Anglo-Italian, g*†	0 15 0	⅝	⅝ ⅞	Jan. 1868
20000	Australian United, g, Victoria	2 10 0	2¾	2⅞ 3⅛	Dec. 1869
50000	Braganza, g, Brazil	0 10 0	½	⅛ ⅝	Dec. 1869
2464	Burra Burra, c, South Australia‡	5 0 0	—		Fully pd.
20000	Capula, s, Mexico*†	2 0 0	⅞	⅞ 1⅛	Jan. 1869
30000	Chontales, g, s, Nicaragua*†	5 0 0	1	1 1⅛	Mar. 1868
100000	Cuiaba, g, Minas Geraes, Brazil	1 0 0	—		Feb. 1870
100000	Eclipse, g, California*	0 10 0	⅜	½ ⅝	Fully pd.
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, g, New Granada*†	1 18 0	1	⅝ ⅞	Nov. 1869
150000	General Brazilian*	0 14 0	⅞	¾ ⅞	Feb. 1869
25000	Guerrero, g, Mexico (total cap.=50,000 shares of £1)	0 10 0	⅝	⅜ ⅝	Aug. 1869
100000	Imperial Ottoman, s-l, Turkey*	1 0 0	—		Fully pd.
50000	Javali, g, Nicaragua	2 0 0	—		Jan. 1869
7927	Lusitanian (Portugal)†‡	3 0 0	¼	¼ ¾	Dec. 1866
250000	Nerbudda Coal and Iron, India*†	0 6 6	—		Dec. 1867
51000	New Quebrada, c, Venezuela*†	4 4 0	—		Fully pd.
15000	Pacific, g, s, Nevada and California*	10 0 0	9	8½ 9	Fully pd.
80000	Pestarena United, g, Italy*†	3 0 0	1	1⅛ 1⅜	Fully pd.
100000	Rossa Grande, g, Brazil*†	0 14 0	¾	¾ 1	June 1867
15000	San Pedro del Monte, s, Mexico*	1 0 0	—		Sept. 1866
50000	Sao Vicente, Brazil*†	0 6 0	⅛	⅛	Oct. 1868
100000	Taquaril, g, Brazil*	0 10 0	1	⅞ 1	Aug. 1869
80000	Tuolumne, g, California*	0 5 0	⅝		
43174	United Mexican, s, Mexico†‡*	28 5 2	3	2½ 3	May 1868
30000	Val Antigoria, g, Italy*	1 12 6	—		
6000	Val Sassam, s, c, l, Italy*†	8 0 0	—		Aug. 1868
80000	Worthing, c, South Australia*†	1 0 0	—		Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	½	¼ ½	Fully pd.
45000	Yudanamutana, c, South Australia*†‡	3 0 0	¾	⅝ ⅞	Fully pd.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
12000	Assheton, l*, Carnarvonshire	5 0 0	11	9 10	Fully pd.
12000	Cae Gynon, l, Cardiganshire*	2 0 0	3½		Fully pd.
1000	Carn Brea, c, t, Illogan‡	30 0 0	—		June 1868
3000	Chiverton, l, Perranzabuloe	11 0 0	2	1½ 2	Mar. 1870
3000	Chiverton Moor, l, Perranzabuloe	7 11 0	6	5 5½	Feb. 1869
1375	Clifford Amalgamated, c, Gwennap‡	150 0 0	—		Oct. 1868
512	East Basset, c, Redruth†‡	40 0 0	2	3 3½	Mar. 1870
6000	East Carn Brea, c, Redruth‡	5 11 6	—		Feb. 1870
6000	East Grenville, c, Camborne	4 11 0	2½	2 2¼	Feb. 1870
3000	Florida, s-l, Cardiganshire*	3 0 0	—		Fully pd.
12500	Great North Laxey (Isle of Man)*	1 0 0	—		Fully pd.
5143	Great South Toigus, c, Redruth	2 2 6	—		Feb. 1870
6000	Hingston Down, c, Calstock†	5 18 6	1	¾ ⅞	Dec. 1869
400	New Wheal Seton, c, Camborne	70 0 0	—		Dec. 1869
3157	North Downs, c, Redruth	5 12 10	—		Mar. 1869
695	North Roskear, c, Camborne	62 19 0	7	7 9	Aug. 1869
5936	North Treskerby, c, St. Agnes	1 16 4	¾	⅝ ¾	Aug. 1869
12000	Penrhyn, l, Carnarvonshire*	2 0 0	3½	2½ 3	Fully pd.
1024	Rose and Chiverton United, l, Newlyn	7 10 0	—		Nov. 1869
5869	Rosewall Hill & Ransom, t‡	4 0 0	1¼	1 1¼	
6123	South Condurrow, t, c, Camborne	5 5 6	1⅛	1¼ 1⅛	Oct. 1869
1500	South Merllyn, l, Flint* (£2 shares)	1 5 0	—		
920	Stray Park, c, t, Camborne†‡	48 1 8	7	5 7	Oct. 1869
12000	Tankerville, l, Salop*	6 0 0	18½	16½ 17¼	Fully pd.
12000	Tan-yr-Allt, l*, Carnarvonshire	3 0 0	8	5½ 6	Fully pd.
12000	Van Consols, Llanidloes, l*	2 10 0	4	3⅝ 3⅞	Fully pd.
15000	Virtuous Lady, c*, Buckland Monachorum, Tavistock	1 0 0	—		Dec. 1869
6000	West Basset, c, Illogan†‡	2 13 0	1⅛		May 1868
12288	West Caradon, c, St. Cleer‡‡	2 13 6	1½	1¼ 1½	Mar. 1870
2000	West Stiperstones, l, Salop*	1 0 0	—		Fully pd.
6000	Wheal Agar, c, Illogan	8 6 6	1⅞	2⅝ 2⅞	Apr. 1870
512	Wheal Buller, c, Redruth†‡	34 5 0	6	5 7	Apr. 1870
5724	Wheal Grenville, c, Camborne†	10 10 0	2¼	1¾ 2¼	Dec. 1869
6240	Wheal Trelawny, s-l, Liskeard†	2 6 0	½		Mar. 1870
4096	Wheal Uny, t, c, Redruth	10 14 6	2½	2½ 2¾	Oct. 1869

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.
12800	Aberdaunant, l, Llanidloes*	5 0 0	—	
2365	Ballycorkish	5 0 0	—	
4000	Bedford Consols, c, Tavistock	3 2 6	—	
4000	Bedford United, c, Tavist.*	3 9 2	1½	1⅛ 1¼
20000	Blaen Caelan,* s-l, Cardig.	1 0 0	—	3¼ 3⅝
5000	Blue Hills, t, c, St. Agnes	0 15 0	—	
1248	Boscaswell, t, c, St. Just	7 6 0	—	
5000	Bottle Hill, t, Plympton	1 14 6	—	
4000	Brookwood, c, Buckfastleigh	1 16 0	—	
1200	Bryn Gwyn, l, Mold*‡	9 0 0	—	
15000	Brynpostig, Montgomery, l*	1 0 0	1¾	1½ 1¾
7500	Brynystwith, l, Cardigan*	2 0 0	2⅜	2 2¼
1000	Budnick Consols, t	4 0 0	4¾	
6000	Bwadrain Cons., s-l, Cardig.	3 5 0	2⅞	
30000	Caldbeck Fells, l, Cumberld.*	1 17 6	1½	
5000	Capel Banhaglog, l, Mont.*	3 0 0	3¾	
914	Caradon Consols, c, St. Cleer	33 6 0	—	
6100	Cardigan Bay, s-l, Aberyst.	5 0 0	8½	9½ 10
6000	Carn Camborne, c, Cambrn.	2 15 6	¾	¾ ⅞
6000	Cefn Consols, l*	5 0 0	6	5½ 5¾
3000	Chiverton Valley, l, Perranz.	2 15 0	5	4½ 5
3000	Chiverton Wheal Virgin, l*	0 5 0	—	¼ ½
256	Condurrow, c, t, Camborne‡	76 10 0	—	
983	Copper Hill, c, Redruth‡	12 10 0	—	
1055	Craddock Moor, c, St. Cleer‡	15 8 0	—	
50000	Crenver & Wheal Abraham*	2 0 0	—	
300	Cwm Darren, Cardigan*	—	—	
4000	Cwm Ricket, l, Montgom.	2 10 0	3½	3¼ 4
1000	Deep Level, s-l, Holywell	30 0 0	—	
4000	Devon & Cornwall United	6 6 0	—	
5000	Dolwen, l, Cardiganshire	0 10 0	1⅛	1 1¼
30000	Dyliffe Consols, s-l, Mont.	1 0 0	1	
1000	East Basset and Grylls, t	3 5 0	—	
2586	East Bottle Hill, Plymp., t, c	1 3 0	2	
4000	East Chiverton, l, Perranz.	3 13 0	—	
4000	E. Gunnislake & S. Bed. c	11 18 0	—	
2048	East Harptree, l, Mendips*	1 5 0	—	
4096	E. New Wh. Lovell, t, Wend.	0 14 0	—	
3640	East Providence, t, Lelant	7 3 3	—	
5000	E. Rosewarne, c, t, Gwinear	3 4 0	—	
5610	East Seton, c, Camborne	1 5 6	⅞	1⅛ 1⅜
2000	East Trumpet, c, t, Helston	2 7 0	—	
6000	East Wheal Reeth	1 8 8	—	
12800	Excelsior, t, c, Stoke Climsld.	0 2 6	⅜	⅛ ¼
5000	Exmouth, s-l, Christow	0 6 6	—	
40000	Glasgow Caradon, c* [30,000 £1 p., 10,000 15s. p.]			
5700	Gogluan, Cardigan, l	12 10 0	—	
6144	Gonamena, c, St. Cleer	8 0 3	—	
4096	Great Caradon, c, St. Ive	4 15 0	⅞	⅝ ¾
3300	Gt. Retallack, s-l, b, Perran.	2 19 6	—	1 1⅛
3000	Great Rock, l, Corwen*	4 0 0	—	
4096	Great Royalton, t	0 13 6	⅞	
6000	Gt. S. Chiverton, s-l, Perranz	2 15 0	—	
12000	Great West Chiverton, s-l	2 10 0	—	
6000	Great Western, t, c, Breage	2 0 0	2	1¾ 2
3313	Gt. Wh. Baddern, t, Devoran	7 17 6	—	
1798	Gt. Wh. Fortune, t, Breage	31 7 4	—	
4096	Gt. Wh. Lovell, t, Wendron	1 0 0	—	1 1¼
10240	Gunnislake (Clitters'), t, c	4 19 0	—	
5000	Gwern Eva, l, Llantrissant	0 8 0	—	
6000	Gwydyr Park, l, Llanrwst	1 15 0	1⅜	1 1¼
6000	Hammett, t, St. Neots	1 0 0	—	
6000	Harewood Consols	0 5 0	—	
1000	Hemerdon United, Plympton	1 0 0	—	
962	Leeds and St. Aubyn, t, c	23 4 2	4½	
30000	Lisburne Cons. s-l, Cardigan*	1 0 0	—	
5000	Llanarmon, Denbigh	2 0 0	—	
20000	Llywernog, l, Cardiganshire	1 0 0	—	
5120	Lovell, t, Wendron	0 3 0	—	
5120	Lovell Consols, Wendron, t	0 10 6	—	
6000	Maudlin, c, Lostwithiel	4 7 0	—	
6000	Mid-Wales, l, Llanidloes*	2 10 0	2⅛	
4662	Minera Union, l [2500 £4 p., 2162 £2 15s. p.]			
3000	Mineral Bottom, s-l	5 10 0	2	
6000	Mold, s-l, Flintshire*	5 0 0	—	
1024	Nangiles, t, c, Kea	36 12 0	10	8 10
12000	Nanteos Consols, l*	1 0 0	—	
10000	New Beldon, l, Northumb.	0 5 0	—	1 1⅛
6000	New Brynpostig, l, Llanid.	0 2 0	2⅜	2⅛ 2⅝
6000	New Clifford, c, Gwennap*	3 5 0	—	
6250	N. Crow Hill, St. Stephen	3 14 0	—	
20000	New Gt. Cons., c, Tavistock*	1 0 0	—	
6400	New Pembroke, St. Blaz. t, c	2 2 0	—	
3425	New Treleigh	6 10 0	—	
3000	N. Wh. Charlotte, t, c, St. Agnes	0 10 0	—	
4096	New Wh. Lovell, t, Wendron	2 14 6	2⅞	2 2¼
2000	N. Wh. Towan, c, t, Wendron	1 10 0	—	
5000	No. Dolcoath, c, Camborne	4 3 0	—	
1861	No. Grambler, c, Redruth	9 3 9	—	
6000	North Jane, t, s-l, Kenwyn	5 0 0	—	
1000	North Lovell, t, Wendron	5 0 0	7	5 5¼
3240	North Pool, c, Illogan	7 3 6	—	1½ 2
1000	North Retallack	2 0 0	—	
3000	N. Wh. Chiverton, l, Perran.	5 0 0	—	
5610	N. Wh. Crofty, c, Illogan†	3 11 3	2	2½ 3⅛
10000	North Wheal Neptune, c, t	0 5 0	—	
12288	Okel Tor, c, Calstock	2 7 4	—	
8000	Old Gunnislake, c, Calstock	3 9 6	—	
6400	Par Consols, c, St. Blazey†‡	2 14 6	—	
5754	Pedn-an-drea, t, Redruth	8 2 0	—	
20000	Pen'Allt	2 0 0	8⅛	
256	Pendarves United	86 0 0	—	
5000	Pendeen Consols, c, St. Just	8 4 0	—	
4000	Penhale United, s-l*	5 0 0	—	
1937	Penhale Wh. Vor, t, c, Breage	8 2 6	—	
12000	Perkin's Beach	1 0 0	2	
6000	Perran Consols, t	1 10 2	2¼	1⅞ 2
3000	Perran Wheal Virgin	0 10 0	—	
16	Perran Wheal Vyvyan	40 0 0	—	
1772	Polberro, t, St. Agnes	15 0 0	2	
2000	Polbreen, t, St. Agnes	3 0 0	4¼	4¼ 4¾
2000	Powell United, s-l, Cardig.*	5 0 0	—	
12800	Princess of Wales, c, t	0 10 0	¼	⅛ ¼
3877	Redmoor, c, t, Callington	2 5 0	1	
4000	Reperry Mine	1 10 0	—	3 3½
6000	Roaring Water, c, Ireland*	2 15 0	—	
3000	Roche Consols, Roche	0 7 6	—	½ ⅝
10000	Royalton, t, St. Columb	1 8 0	—	
20500	Snaefell, l, Isle of Man*	1 0 0	—	
512	South Basset, c, Gwennap	30 10 0	—	
1000	South Bwadrain, l, Cardig.	1 0 0	—	
5000	South Carn Brea, c, t	1 0 0	1¼	
3000	So. Chiverton, s, l, Perranz.	6 2 6	—	
5000	So. Gt. Work, t, c, St. Hilary	0 2 6	—	
6000	South Grenville, c	0 2 0	—	
3395	So. Herodsfoot, l, Liskeard	4 17 0	—	
2048	South Redmoor, c, Call.	1 0 0	—	
5000	South St. Just, t	2 0 0	—	
12000	South Van	1 0 0	1¼	
320	So. Wh. Seton, c, Camborne	94 3 0	17	15 17
236	Spearne Consols	4 4 4	6	
7000	Stiperstones, l, Salop*	6 0 0	—	
6000	Tamar Valley, s-l, Beeralston	1 2 0	—	
25000	Terras Tin Mine	1 0 0	—	1¼ 1⅜
3500	Tin Hill, t, St. Austell	1 12 0	—	
6000	Tin Valley, St. Neot	1 3 6	—	
548	Trelyon Consols, t, St. Ives	16 10 0	4½	4 4½
512	Trerew	8 0 0	—	
459	Tresavean and Trethurrup	19 6 0	—	
2048	Trevarrack United	1 0 0	2¼	2¼ 2½
10000	Treveddoe, t, c, Warleggan	1 10 0	—	
4096	Trewetha, s-l, Menheniot	10 19 6	—	
70	Tygwyn, l, Cardiganshire	25 0 0	—	
2500	Van Iron Ore*	10 0 0	16¼	
1000	Vaughan, s-l, Cardigan	2 0 0	—	
7664	Vigra and Clogau, c, Dolg.*‡	5 0 0	—	
1000	West Cwm Erfin, s-l	0 10 0	—	
256	West Damsel, c, Gwennap	38 10 0	2¾	2⅛ 2⅜
12800	W. Drake Walls, c, Calstock	0 10 0	⅜	⅛ ¼
10000	West Jewell, t, St. Hilary	2 0 0	—	
16	West Margaret, t	65 0 0	—	
12000	W. Maria & Fortes., c, Lam.	3 13 0	2	2¼ 2⅝
12000	West Pant-y-Go, s-l, Flint*	1 0 0	1⅜	
12800	West Prince of Wales, c	0 16 0	—	
12000	West Rhoswyddol	1 0 0	—	
838	West Rose Down, c, Linking.	25 7 6	—	
3535	West St. Ives, t, c, St. Ives	0 10 0	—	
12000	West Tankerville	3 0 0	3¾	
512	West Toigus, c, Redruth	66 0 0	—	
5000	West Wh. Kitty, t, St. Agnes	3 14 0	—	
3584	W. Wh. Tremayne, St. Erth	1 1 0	1	
741	Wheal Basset and Grylls, t	7 18 6	—	
5609	Wh. Courtenay, c, Tavistock	0 19 6	—	
5368	Wheal Crebor, c, Tavistock	2 12 6	—	
811	Wh. Emily Henrietta, c, Illo.	21 15 0	12	
4000	Wh. Emma, c, Buckfastleigh	3 19 0	—	
1560	Wheal Falmouth & Sperries	9 1 0	—	
6000	Wheal Franco Consols, t, c	0 4 0	—	
6000	Wheal Ida, s-l, St. Ive	1 12 0	⅜	
6000	Wheal Mary Florence	2 13 0	—	
4663	Wheal Sparnon, c	3 17 0	—	
1920	Wh. Trannack, c, Sithney	1 13 3	—	

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; sl, slate; s-l, silver-lead; t, tin; z, zinc.

*** Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Exchange, those marked thus ‡ have paid Dividends.

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